```
=> d his ful
```

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(FILE 'HOME' ENTERED AT 11:15:44 ON 06 APR 2006)
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FILE 'REGISTRY' ENTERED AT 11:15:51 ON 06 APR 2006

- L1 STR
- L2 0 SEA SSS SAM L1
- L3 2 SEA SSS FUL L1

D SCA

FILE 'HCAPLUS' ENTERED AT 11:21:34 ON 06 APR 2006 L4 1 SEA ABB=ON PLU=ON L3

FILE 'BEILSTEIN' ENTERED AT 11:22:03 ON 06 APR 2006

- L5 0 SEA SSS SAM L1
- L6 1 SEA SSS FUL L1
- L7 1 SEA ABB=ON PLU=ON L6/COM

FILE 'MARPAT' ENTERED AT 11:25:57 ON 06 APR 2006

- L8 1 SEA SSS SAM L1
- L9 6 SEA SSS FUL L1
- L10 2 SEA ABB=ON PLU=ON L9/COM
- L\*\*\* DEL 2 S L9/COM
- L11 1 SEA ABB=ON PLU=ON L10 NOT L4

FILE 'STNGUIDE' ENTERED AT 11:27:38 ON 06 APR 2006

FILE 'REGISTRY' ENTERED AT 11:37:45 ON 06 APR 2006

- L12 STR L1
- L\*\*\* DEL 1 S L12

L14

- L13 STR L12
  - 1 SEA SSS SAM L13

D SCA

- L15 O SEA ABB=ON PLU=ON C66/ES AND F/ELS
- L16 68869 SEA ABB=ON PLU=ON C6-C6/ES AND F/ELS
- L17 892571 SEA ABB=ON PLU=ON C6-C6/ES
- L18 0 SEA SUB=L17 SSS SAM L12
- L19 142 SEA SUB=L17 SSS FUL L12

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FILE 'REGISTRY' ENTERED AT 11:44:30 ON 06 APR 2006 L21 3 SEA SUB=L19 SSS SAM L13

FILE 'HCAPLUS' ENTERED AT 11:44:30 ON 06 APR 2006 L22 2 SEA ABB=ON PLU=ON L21

FILE 'REGISTRY' ENTERED AT 11:44:36 ON 06 APR 2006

- L23 3 SEA SUB=L19 SSS SAM L13
- L24 142 SEA SUB=L19 SSS FUL L13

FILE 'HCAPLUS' ENTERED AT 11:45:41 ON 06 APR 2006 L25 468 SEA ABB=ON PLU=ON L24

FILE 'STNGUIDE' ENTERED AT 11:45:52 ON 06 APR 2006

FILE 'REGISTRY' ENTERED AT 11:55:25 ON 06 APR 2006

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L29
           466 SEA ABB=ON PLU=ON L28
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L30
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            50 SEA ABB=ON PLU=ON L28 NOT L31
L34
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            21 SEA ABB=ON PLU=ON L28 NOT L31
L35
     FILE 'HCAPLUS' ENTERED AT 12:14:32 ON 06 APR 2006
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     FILE 'REGISTRY' ENTERED AT 12:16:04 ON 06 APR 2006
L38
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L41
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L42
            63 SEA ABB=ON PLU=ON L38
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# FILE HOME

#### FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 4 APR 2006 HIGHEST RN 879269-14-4 DICTIONARY FILE UPDATES: 4 APR 2006 HIGHEST RN 879269-14-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH January 6, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

```
****************
```

\* The CA roles and document type information have been removed from \* the IDE default display format and the ED field has been added, \* effective March 20, 2005. A new display format, IDERL, is now \* available and contains the CA role and document type information. \*

\*\*\*\*\*\*\*\*\*\*

Structure search iteration limits have been increased. See HELP SLIMITS for details.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/ONLINE/UG/regprops.html

FILE HCAPLUS

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FILE COVERS 1907 - 6 Apr 2006 VOL 144 ISS 15 FILE LAST UPDATED: 4 Apr 2006 (20060404/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

FILE BEILSTEIN
FILE LAST UPDATED ON MARCH 15, 2006

FILE COVERS 1771 TO 2006.
FILE CONTAINS 9,516,393 SUBSTANCES

>>>PLEASE NOTE: Reaction Data and substance data are stored in separate documents and can not be searched together in one query. Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For mo detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

- \* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST.
- \* SET NOTICE FEATURE: THE COST ESTIMATES CALCULATED FOR SET NOTICE
- \* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE
- \* ESTIMATES MAY NOT REFLECT THE ACTUAL COSTS.
- \* FOR PRICE INFORMATION SEE HELP COST

\*\*\*\*\*\*\*\*\*\*\*\*

NEW

- \* PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE SEARCHED, SELECTED AND TRANSFERRED.
- \* NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES, ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A COMPOUND AT A GLANCE.

FILE MARPAT

FILE CONTENT: 1961-PRESENT VOL 144 ISS 14 (20060331/ED)

SOME MARPAT RECORDS ARE DERIVED FROM INPI DATA FOR 1961-1987

MOST RECENT CITATIONS FOR PATENTS FROM MAJOR ISSUING AGENCIES (COVERAGE TO THESE DATES IS NOT COMPLETE):

```
2006035965 16 FEB 2006
US
DE 102004039876 26 JAN 2006
        1621541 01 FEB 2006
EΡ
     2006045074 16 FEB 2006
JΡ
    2006012333 02 FEB 2006
WO
GB
        2416167 18 JAN 2006
        2874013 10 FEB 2006
FR
        2267521 10 JAN 2006
RU
        2512063 14 JAN 2006
CA
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Expanded G-group definition display now available.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

FILE STNGUIDE FILE CONTAINS CURRENT INFORMATION. LAST RELOADED: Mar 31, 2006 (20060331/UP).

=> fil hcap

FILE 'HCAPLUS' ENTERED AT 12:30:32 ON 06 APR 2006
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This file contains CAS Registry Numbers for easy and accurate substance identification.

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 11 G2
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 VAR G2=X/53
 VAR G3=47/48/50
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                          20
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 STEREO ATTRIBUTES: NONE
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               1 SEA FILE=HCAPLUS ABB=ON PLU=ON L3
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 > d l4 ibib abs hitstr
    ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2006 ACS on STN
```

Tetrahydronaphthalene derivatives, their

1987:49807 HCAPLUS

106:49807

ACCESSION NUMBER:

DOCUMENT NUMBER:

TITLE:

intermediates, and medicines containing them

INVENTOR(S): Hengartner, Urs; Ramuz, Henri

PATENT ASSIGNEE(S): Hoffmann-La Roche, F., und Co. A.-G., Fed. Rep. Ger.

SOURCE: Eur. Pat. Appl., 53 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.                         | KIND   | DATE      | APPLICATION NO. |   | DATE     |
|------------------------------------|--------|-----------|-----------------|---|----------|
|                                    | A2     |           | EP 1985-112863  | _ | 19851010 |
| EP 177960                          |        |           |                 |   |          |
| EP 177960                          | B1     |           |                 |   |          |
|                                    |        |           | I, LU, NL, SE   |   |          |
| FI 8503817                         | Α      | 19860412  | FI 1985-3817    |   | 19851002 |
| FI 8503817<br>FI 83508<br>FI 83508 | В      | 19910415  |                 |   |          |
| FI 83508                           | С      |           |                 |   |          |
|                                    | A1     |           | AU 1985-48301   |   | 19851004 |
| AU 589375                          | В2     | 19891012  |                 |   |          |
| ZA 8507681                         | Α      | 19860528  | ZA 1985-7681    |   | 19851004 |
|                                    | A1     | 19890131  |                 |   |          |
| JP 61091157                        | A2     | 19860509  | JP 1985-222893  |   | 19851008 |
| ни 38605                           | A2     | 19860630  | ни 1985-3915    |   | 19851009 |
|                                    | В      |           |                 |   |          |
| CN 85107496                        |        |           | CN 1985-107496  |   | 19851009 |
| CN 1007727                         | В      | 19900425  |                 |   |          |
| CA 1287636                         | A1     | 19910813  | CA 1985-492588  |   | 19851009 |
| DK 8504648                         | Α      | 19860412  | DK 1985-4648    |   | 19851010 |
| NO 8504036                         | A<br>B | 19860414  | NO 1985-4036    |   | 19851010 |
| NO 161971                          | В      | 19890710  |                 |   |          |
| NO 161971                          | С      | 19891018  |                 |   |          |
| ES 547756                          | A1     | 19861116  | ES 1985-547756  |   | 19851010 |
| US 4680310                         | Α      |           | US 1985-786253  |   | 19851010 |
| AT 61791                           | E      | 19910415  |                 |   |          |
| ES 554021                          | A1     | 19871216  |                 |   | 19860416 |
| ES 554020                          | A1     | 19880516  |                 |   | 19860416 |
| PRIORITY APPLN. INFO.:             |        |           | CH 1984-4870    | Α | 19841011 |
|                                    |        |           | EP 1985-112863  | Α | 19851010 |
|                                    |        | 100 10007 |                 |   |          |

OTHER SOURCE(S): MARPAT 106:49807

GΙ

AB Tetrahydronaphthalene derivs. I [R = H, alkyl; R1-R4 = H, halo, alkoxy, etc.; R5-R9 = H, halo, C1-10 alkoxy, alkylthio,  $\omega, \omega, \omega$ -trifluoroalkoxy, etc.; Y = OH, alkylcarbonyloxy, alkoxyalkylcarbonyloxy,

Ι

alkoxycarbonyloxy, alkoxyalkoxycarbonyloxy, alkylthioalkylcarbonyloxy, (un)substituted benzylcarbonyloxy; m=1, 2; n=1, 2, 3] in racemates and optical antipodes, having Ca-antagonistic and antiarrhythmic effects, are prepared Thus, 2-(p-fluorphenyl)-3-methylbutyric acid was converted to the acid chloride and treated with ethylene in the presence of AlCl3 to give 6-fluoro-3,4-dihydro-1-isopropyl-2(1H)-naphthalenone, which underwent Grignard reaction with BrCH2CO2CMe3, followed by reduction with LiAlH4, to give 6-fluoro-1,2,3,4-tetrahydro-2-hydroxy-1 $\alpha$ -isopropyl-2 $\beta$ -naphthalenylethanol. This intermediate was tosylated, condensed with N-methylhomoveratrylamine, and acylated with methoxyacetyl chloride to give 2-[2-[(3,4-dimethoxyphenylethyl)methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1 $\alpha$ -isopropyl-2 $\alpha$ -naphthyl methoxyacetate-HCl (II). II was tested for Ca-antagonistic and hypotensive effects. A tablet was formulated containing II 75, lactose 135, starch 70, Povidone K 15, talc 3, and Mg stearate 2 mg.

IT 104205-35-8P 104221-42-3P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of, as calcium antagonist)

RN 104205-35-8 HCAPLUS

CN Carbonic acid, 2-[2-[[2-(3,4-dimethoxyphenyl)ethyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ethyl ester, hydrochloride, cis- (9CI) (CA INDEX NAME)

Relative stereochemistry.

● HCl

RN 104221-42-3 HCAPLUS

CN Carbonic acid, 2-[2-[[2-(3,4-dimethoxyphenyl)ethyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ethyl ester, cis-(9CI) (CA INDEX NAME)

Relative stereochemistry.

=> fil beilst FILE 'BEILSTEIN' ENTERED AT 12:30:50 ON 06 APR 2006 COPYRIGHT (c) 2006 Beilstein-Institut zur Foerderung der Chemischen Wissenschaften licensed to Beilstein GmbH and MDL Information Systems GmbH

FILE LAST UPDATED ON MARCH 15, 2006

FILE COVERS 1771 TO 2006.
\*\*\* FILE CONTAINS 9,516,393 SUBSTANCES \*\*\*

>>>PLEASE NOTE: Reaction Data and substance data are stored in separate documents and can not be searched together in one query. Reaction data for BEILSTEIN compounds may be displayed immediately with the display codes PRE (preparations) and REA (reactions). A substance answer set retrieved after the search for a chemical name, a compounds with available reaction information by combining with PRE/FA, REA/FA or more generally with RX/FA. The BEILSTEIN Registry Number (BRN) is the link between a BEILSTEIN compound and belonging reactions. For mo detailed reaction searches BRNs can be searched as reaction partner BRNs Reactant BRN (RX.RBRN) or Product BRN (RX.PBRN).<<<

>>> FOR SEARCHING PREPARATIONS SEE HELP PRE <<<

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

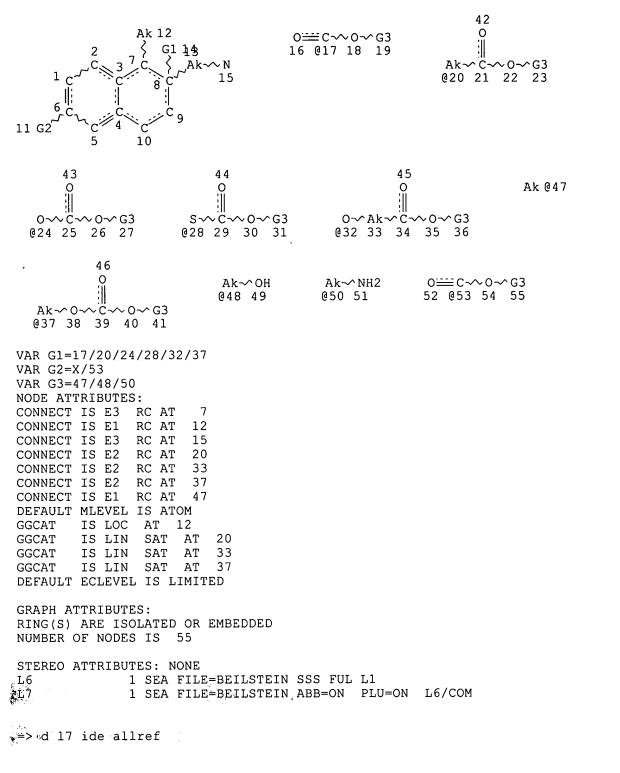
- \* PLEASE NOTE THAT THERE ARE NO FORMATS FREE OF COST.
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- \* ARE BASED ON THE HIGHEST PRICE CATEGORY. THEREFORE; THESE
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\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### NEW

- \* PATENT NUMBERS (PN) AND BABS ACCESSION NUMBERS (BABSAN) CAN NOW BE SEARCHED, SELECTED AND TRANSFERRED.
- \* NEW DISPLAY FORMATS ALLREF, ALLP AND BABSAN SHOW ALL REFERENCES, ALL PATENT REFERENCES, OR ALL BABS ACCESSION NUMBERS FOR A COMPOUND AT A GLANCE.

=> d que stat 17 L1 STR



L7 ANSWER 1 OF 1 BEILSTEIN COPYRIGHT 2006 BEILSTEIN MDL on STN

Beilstein Records (BRN): 8180430 Chemical Name (CN): RO-40-5967

Autonom Name (AUN): carbonic acid 2-(2-<<3-(1H-benzoimidazol-2-

2000/02/26

yl)-propyl>-methyl-amino>-ethyl)-6-fluoro-1-isopropyl-1,2,3,4-tetrahydro-naphthalen-2-yl ester ethyl ester; compound with GENERIC INORGANIC NEUTRAL COMPONENT

Fragm. Molec. Formula (FMF): C29 H38 F N3 O3 , C1 H Molecular Formula (MF): C29 H38 F N3 O3 . 2 C1 H

Molecular Weight (MW): 495.64, 36.46 Fragment BRN (FBRN): 8173779, 1098214

Lawson Number (LN): 29577, 15006, 2817, 1762, 298

File Segment (FS): Stereo compound Compound Type (CTYPE): heterocyclic Constitution ID (CONSID): 6958260 Tautomer ID (TAUTID): 7721684 Entry Date (DED): 2000/02/26

CM 1

FBRN 8173779 FMF C29 H38 F N3 O3

Update Date (DUPD):

CM 2

FBRN 1098214 FMF Cl H

# Field Availability:

| Code   | Name                       | Occurrence |
|--------|----------------------------|------------|
| BRN    | Beilstein Records          | 1          |
| CN     | Chemical Name              | 1          |
| AUN    | Autonomname                | 1          |
| FMF    | Fragment Molecular Formula | 2          |
| MF     | Molecular Formula          | 1          |
| FW     | Formular Weight            | 2          |
| FBRN   | Fragment BRN               | 2          |
| LN     | Lawson Number              | 5          |
| FS     | File Segment               | 1          |
| CTYPE  | Compound Type              | 1          |
| CONSID | Constitution ID            | 1          |

TAUTID Tautomer ID 1
DED Entry Date 1
DUPD Update Date 1
PHARM Pharmacological Data 1

# All References:

ALLREF

 Rutledge, Aleta; Triggle, David J., Eur. J. Pharmacol., CODEN: EJPHAZ, 280(2), <1995>, 155 - 158; BABS-6131105

=> fil marpat FILE MARPAT' ENTERED AT 12:31:16 ON 06 APR 2006 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2006 American Chemical Society (ACS)

FILE CONTENT: 1961-PRESENT VOL 144 ISS 14 (20060331/ED)

SOME MARPAT RECORDS ARE DERIVED FROM INPI DATA FOR 1961-1987

MOST RECENT CITATIONS FOR PATENTS FROM MAJOR ISSUING AGENCIES (COVERAGE TO THESE DATES IS NOT COMPLETE):

US 2006035965 16 FEB 2006
DE 102004039876 26 JAN 2006
EP 1621541 01 FEB 2006
JP 2006045074 16 FEB 2006
WO 2006012333 02 FEB 2006
GB 2416167 18 JAN 2006
FR 2874013 10 FEB 2006
RU 2267521 10 JAN 2006
CA 2512063 14 JAN 2006

Expanded G-group definition display now available.

New CAS Information Use Policies, enter HELP USAGETERMS for details.

=> d que stat 111 L1 STR

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                                                           0
                                   0 == C ~ 0 ~ G3
                   G1 143
                                   16 @17 18 19
                      Ak \sim N
                                                              ~0~G3
                                                       Ak~ C~
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                                                      @20 21 22 23
11 G2
                10
      43
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                          0
                      S~C~O~G3
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   0~C~O~G3
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  @24 25 26 27
                     @28 29 30 31
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                                       Ak~NH2
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                                                    52 @53 54 55
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VAR G3=47/48/50
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CONNECT IS E2
               RC AT
                      37
CONNECT IS E1
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                      47
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GGCAT
        IS LOC
                AT 12
GGCAT
        IS LIN
                SAT
                    AΤ
                          20
GGCAT
        IS LIN
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                    AΤ
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GGCAT
        IS LIN
                SAT AT
                          37
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RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 55
STEREO ATTRIBUTES: NONE
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L4
              1 SEA FILE=HCAPLUS ABB=ON PLU=ON L3
L9
              6 SEA FILE=MARPAT SSS FUL L1
,L10
              2 SEA FILE=MARPAT ABB=ON PLU=ON
                                                 L9/COM
L11
              1-SEA FILE MARPAT ABB=ON PLU=ON L10 NOT L4
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# => d lll ibib abs qhit

L11 ANSWER 1 OF 1 MARPAT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

138:297661 MARPAT

TITLE:

Mibefradil-based compounds as calcium channel blockers

useful in the treatment of hypertension and angina Druzgala, Pascal; Milner, Peter G.; Pfister, Jurg R.; INVENTOR(S):

Zhang, Xiaoming

Aryx Therapeutics, USA PATENT ASSIGNEE(S): PCT Int. Appl., 50 pp. SOURCE:

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

=> 111 qhit

L11 IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system. For a list of commands available to you in the current file, enter "HELP COMMANDS" at an arrow prompt (=>).

=> d 111 qhit

L11 ANSWER 1 OF 1 MARPAT COPYRIGHT 2006 ACS on STN

# MSTR 1

= bond G1 G3 = Me G5 = FG17 = 70

Patent location: claim 2

Note: substitution is restricted

=> d lll ibib abs qhit

L11 ANSWER 1 OF 1 MARPAT COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 138:297661 MARPAT

TITLE: Mibefradil-based compounds as calcium channel blockers

useful in the treatment of hypertension and angina

INVENTOR(S): Druzgala, Pascal; Milner, Peter G.; Pfister, Jurg R.;

Zhang, Xiaoming

PATENT ASSIGNEE(S): Aryx Therapeutics, USA

04/06/2006

Kantamneni 10/643,699

SOURCE:

PCT Int. Appl., 50 pp.

CODEN: PIXXD2

DOCUMENT TYPE: LANGUAGE: Patent English

> 6:1 haan

=> fil hcap FILE 'HCAPLUS' ENTERED AT 12:32:37 ON 06 APR 2006 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2006 AMERICAN CHEMICAL SOCIETY (ACS)

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FILE COVERS 1907 - 6 Apr 2006 VOL 144 ISS 15 FILE LAST UPDATED: 4 Apr 2006 (20060404/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que stat 140 L12 STR

Page 1-A

Page 2-A VAR G1=17/20/24/28/32/37 VAR G2=X/53 VAR G3=47/48/50 REP G4 = (0-3) CH2 NODE ATTRIBUTES: CONNECT IS E3 RC AT CONNECT IS E1 RC AT 12 CONNECT IS E3 RC AT CONNECT IS E2 RC AT CONNECT IS E2 RC AT 33 CONNECT IS E2 RC AT 37 CONNECT IS E1 RC AT 47 DEFAULT MLEVEL IS ATOM IS LOC AT 12 GGCAT GGCAT IS LIN SAT AT IS LIN SAT AT GGCAT IS LIN SAT AT GGCAT DEFAULT ECLEVEL IS LIMITED

# GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

# NUMBER OF NODES IS 61

STEREO ATTRIBUTES: NONE L13

Ak 12 \$ G1 148

Ak @47 Ak√OH @48 49

Ak~\ NH2 050 51

52 @53 54 55

Page 1-A

Page 2-A

VAR G1=17/20/24/28/32/37

VAR G2=X/53

VAR G3=47/48/50

REP G4 = (0-1) CH2

NODE ATTRIBUTES:

CONNECT IS E3 RC AT

CONNECT IS E1 RC AT 12

CONNECT IS E3 RC AT 15

CONNECT IS E2 RC AT 20

CONNECT IS E2 RC AT 33

CONNECT IS E2 RC AT

CONNECT IS E1 RC AT 47 DEFAULT MLEVEL IS ATOM

GGCAT IS LOC AT 12

IS LIN SAT AT GGCAT

20 IS LIN SAT AT GGCAT 33

IS LIN SAT GGCAT AT 37

# DEFAULT ECLEVEL IS LIMITED

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GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 61
```

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STEREO ATTRIBUTES: NONE
L17
         892571 SEA FILE=REGISTRY ABB=ON PLU=ON C6-C6/ES
L19
            142 SEA FILE=REGISTRY SUB=L17 SSS FUL L12
L24
            142 SEA FILE=REGISTRY SUB=L19 SSS FUL L13
L26
                STR
                       22
                                          Ak @23
                       0
                                                   Ak~OH
                                                                Ak~NH2
          i-Pr 11 12
                                                   @24 25
                                                               @26 27
                  G1~C~CH2-O~G2
                       18 19 20 21
                              15
                   CH2~~ CH2~~ N~~ G3
                        14
                              \
                             Ġ4
            10
                              17
       32
                                           49
       0
                                           0
                       Ak~G6~Cy
                                                          N√Ak
                                                          @51 52
                      @37 38 39
   Ak~C~~O~G2
                                       Ak~C~G5~Cv
   @28 29 30 31
                                       033 34 35 36
                45
         41
@50 Ak_40~ N
                            N~G2
                            @53 54
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REP G1 = (0 - 6) A VAR G2=23/24/26 VAR G3=ME/28 VAR G4=33/37/50VAR G5=0/NH/51 VAR G6=0/S/NH/53 NODE ATTRIBUTES: CONNECT IS E1 RC AT 23 CONNECT IS E2 RC AT 28 CONNECT IS E2 RC AT 33 CONNECT IS E2 RC AT 37 CONNECT IS E2 RC AT 41 CONNECT IS E2 RC AT CONNECT IS E1 RC AT 52 DEFAULT MLEVEL IS ATOM **GGCAT** IS LIN LOC SAT 28 AT **GGCAT** IS LIN LOC SAT ΑT 33 GGCAT IS LIN LOC SAT AT 37 GGCAT IS LIN LOC SAT AT 50 GGCAT IS LOC ΑT 52

48

# DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 54

STEREO ATTRIBUTES: NONE

| L28  | 22 | SEA | FILE=REGISTRY | SUB=L24 | SSS FUL | L26         |
|------|----|-----|---------------|---------|---------|-------------|
| L31  | 1  | SEA | FILE=REGISTRY | ABB=ON  | PLU=ON  | 116644-53-2 |
| L35  | 21 | SEA | FILE=REGISTRY | ABB=ON  | PLU=ON  | L28 NOT L31 |
| L38  | 1  | SEA | FILE=REGISTRY | ABB=ON  | PLU=ON  | 116666-63-8 |
| "L39 | 20 | SEA | FILE=REGISTRY | ABB=ON  | PLU=ON  | L35 NOT L38 |

13 SEA FILE=HCAPLUS ABB=ON PLU=ON L39

# = d 140 ibib abs hitstr 1-13

L40 ANSWER 1 OF 13 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:531365 HCAPLUS

DOCUMENT NUMBER: 141:65063

TITLE: Use of a combination containing a non-nucleoside

reverse transcriptase inhibitor (NNRTI) with an inhibitor of cytochrome p450 for the treatment of

HIV-1 infection

INVENTOR(S): Cordingley, Michael Graham

PATENT ASSIGNEE(S): Boehringer Ingelheim International GmbH, Germany

SOURCE: PCT Int. Appl., 23 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PA      | PATENT NO.           |      |     | KIND DATE |     |     | APPLICATION NO. |      |     |            |           | DATE  |     |     |     |      |     |    |
|---------|----------------------|------|-----|-----------|-----|-----|-----------------|------|-----|------------|-----------|-------|-----|-----|-----|------|-----|----|
| WO      | 2004                 | 0545 | 86  |           | A1  | _   | 2004            | 0701 | Ī   | WO 2       | <br>003-: | EP14: | 224 |     | 2   | 0031 | 215 |    |
|         | W:                   | ΑE,  | AG, | AL,       | AM, | ΑT, | ΑU,             | ΑZ,  | BA, | BB,        | BG,       | BR,   | BW, | BY, | ΒZ, | CA,  | CH, |    |
|         |                      | CN,  | CO, | CR,       | CU, | CZ, | DE,             | DK,  | DM, | DZ,        | EC,       | EE,   | EG, | ES, | FI, | GB,  | GD, |    |
|         |                      | GE,  | GH, | GM,       | HR, | HU, | ID,             | IL,  | IN, | IS,        | JP,       | ΚE,   | KG, | ΚP, | KR, | ΚZ,  | LC, |    |
|         |                      | LK,  | LR, | LS,       | LT, | LU, | LV,             | MA,  | MD, | MG,        | MK,       | MN,   | MW, | MX, | ΜZ, | NI,  | NO, |    |
|         |                      | NZ,  | OM, | PG,       | PH, | PL, | PT,             | RO,  | RU, | SC,        | SD,       | SE,   | SG, | SK, | SL, | SY,  | ТJ, |    |
|         |                      | TM,  | TN, | TR,       | TT, | ΤZ, | UA,             | UG,  | US, | UZ,        | VC,       | VN,   | YU, | ZA, | ZM, | zw   |     |    |
|         | RW:                  | BW,  | GH, | GM,       | ΚE, | LS, | MW,             | ΜZ,  | SD, | SL,        | SZ,       | ΤZ,   | UG, | ZM, | ZW, | AM,  | ΑZ, |    |
|         |                      | BY,  | KG, | ΚZ,       | MD, | RU, | ТJ,             | TM,  | ΑT, | BE,        | BG,       | CH,   | CY, | CZ, | DE, | DK,  | EE, |    |
|         |                      | ES,  | FΙ, | FR,       | GB, | GR, | HU,             | ΙE,  | IT, | LU,        | MC,       | NL,   | PT, | RO, | SE, | SI,  | SK, |    |
|         |                      | TR,  | BF, | ВJ,       | CF, | CG, | CI,             | CM,  | GΑ, | GN,        | GQ,       | GW,   | ML, | MR, | ΝE, | SN,  | TD, | ΤG |
| CA      | 2510                 | 143  |     |           | AA  |     | 2004            | 0701 | (   | CA 2       | 003-      | 2510  | 143 |     | 2   | 0031 | 215 |    |
| AU      | 2003                 | 2966 | 47  |           | A1  |     | 2004            | 0709 | i   | AU 2       | 003-      | 2966  | 47  |     | 2   | 0031 | 215 |    |
|         | 2004                 |      |     |           |     |     |                 |      |     |            |           |       |     |     |     |      |     |    |
| EP      | 1575                 | 595  |     |           | A1  |     | 2005            | 0921 |     | EP 2       | 003-      | 8131  | 19  |     | 2   | 0031 | 215 |    |
|         | R:                   | ΑT,  | BE, | CH,       | DE, | DK, | ES,             | FR,  | GB, | GR,        | ΙT,       | LI,   | LU, | NL, | SE, | MC,  | PT, |    |
|         |                      | ΙE,  | SI, | LT,       | LV, | FI, | RO,             | MK,  | CY, | AL,        | TR,       | BG,   | CZ, | EE, | HU, | SK   |     |    |
| BR      | 2003                 | 0170 | 95  |           | Α   |     | 2005            | 1025 |     | BR 2       | 003-      | 1709  | 5   |     | 2   | 0031 | 215 |    |
| NO      | 2005                 | 0034 | 55  |           | Α   |     | 2005            | 0810 | 1   | NO 2       | 005-      | 3455  |     |     | 2   | 0050 | 715 |    |
| PRIORIT | IORITY APPLN. INFO.: |      |     |           |     |     | US 2002-433690P |      | 90P | P 20021216 |           |       |     |     |     |      |     |    |
|         |                      |      |     |           |     |     |                 |      | 1   | WO 2       | 003-      | EP14  | 224 | 1   | W 2 | 0031 | 215 |    |

AB An improved method for using a NNRTI in the treatment of HIV-1 infection comprises administering to a human in need of treatment for HIV-1 infection a therapeutically effective amount of the NNRTI, or a

pharmaceutically acceptable salt thereof, and an amount of an inhibitor of cytochrome P 450 that is sufficient to elevate, enhance, or extend plasma concns. of said NNRTI.

# 710282-37-4

ΙT

CN

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(non-nucleoside reverse transcriptase inhibitor combination with cytochrome P 450 inhibitor for treatment of HIV-1 infection)

RN 710282-37-4 HCAPLUS

Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester, mixt. with 11-ethyl-5,11-dihydro-5-methyl-8-[2-[(1-oxido-4-quinolinyl)oxy]ethyl]-6H-dipyrido[3,2-b:2',3'-e][1,4]diazepin-6-one (9CI) (CA INDEX NAME)

CM 1

CRN 380378-81-4 CMF C25 H23 N5 O3

CM 2

CRN 116644-53-2 CMF C29 H38 F N3 O3

Absolute stereochemistry.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 2 OF 13 HCAPLUS COPYRIGHT 2006 ACS on STN

2000:405028 HCAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 133:217516

TITLE: High affinity interaction of mibefradil with

voltage-gated calcium and sodium channels

AUTHOR(S): Eller, Philipp; Berjukov, Stanislav; Wanner, Siegmund;

Huber, Irene; Hering, Steffen; Knaus, Hans-Gunther;

Toth, Geza; Kimball, S. David; Striessnig, Jorg CORPORATE SOURCE:

Institut fur Biochemische Pharmakologie, Innsbruck,

A-6020, Austria

British Journal of Pharmacology (2000), 130(3), SOURCE:

669-677

CODEN: BJPCBM; ISSN: 0007-1188

Nature Publishing Group PUBLISHER:

DOCUMENT TYPE: Journal English LANGUAGE:

Mibefradil is a novel Ca2+ antagonist which blocks both high-voltage AB activated and low voltage-activated Ca2+ channels. Although L-type Ca2+ channel block was demonstrated in functional expts. its mol. interaction with the channel has not yet been studied. We therefore investigated the binding of [3H]-mibefradil and a series of mibefradil analogs to L-type Ca2+ channels in different tissues. [3H]-Mibefradil labeled a single class of high affinity sites on skeletal muscle L-type Ca2+ channels (KD of  $2.5\pm0.4$  nM, Bmax =  $56.4\pm2.3$  pmol mg-1 of protein). Mibefradil (and a series of analogs) partially inhibited (+)-[3H]-isradipine binding to skeletal muscle membranes but stimulated binding to brain L-type Ca2+ channels and  $\alpha$ 1C-subunits expressed in tsA201 cells indicating a tissue-specific, non-competitive interaction between the dihydropyridine and mibefradil binding domain. [3H]-Mibefradil also labeled a heterogeneous population of high affinity sites in rabbit brain which was inhibited by a series of nonspecific Ca2+ and Na+-channel blockers. Mibefradil and its analog RO40-6040 had high affinity for neuronal voltage-gated Na+-channels as confirmed in binding (apparent Ki values of 17 and 1.0 nM, resp.) and functional expts. (40% use-dependent inhibition of Na+-channel current by 1  $\mu$ M mibefradil in GH3 cells). Our data demonstrate that mibefradil binds to voltage-gated L-type Ca2+ channels with very high affinity and is also a potent blocker of voltage-gated neuronal Na+-channels. More lipophilic mibefradil analogs may possess neuroprotective properties like other nonselective Ca2+-/Na+-channel blockers.

ΙT **291307-58-9**, Ro 19-8287

> RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(high affinity interaction of mibeadil with voltage-gated calcium and sodium channels)

RN 291307-58-9 HCAPLUS

Benzoic acid, 4-[[6-[[2-[6-fluoro-1,2,3,4-tetrahydro-2-CN [(methoxyacetyl)oxy]-1-(1-methylethyl)-2-naphthalenyl]ethyl]methylamino]-1oxoheptyl]amino]-, methyl ester (9CI) (CA INDEX NAME)

IT **291307-57-8**, Ro 19-6945

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(high affinity interaction of mibefradil with voltage-gated calcium and sodium channels)

RN 291307-57-8 HCAPLUS

CN Acetic acid, methoxy-, 6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-[2-[methyl[1-methyl-6-oxo-6-[[4-(trifluoromethyl)phenyl]amino]hexyl]amino]eth yl]-2-naphthalenyl ester (9CI) (CA INDEX NAME)

REFERENCE COUNT:

THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 3 OF 13 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

1999:819361 HCAPLUS

DOCUMENT NUMBER:

132:44979

TITLE:

Nitrate salts of antihypertensive medicines

INVENTOR(S):

Del, Soldato Piero

PATENT ASSIGNEE(S):

Nicox S. A., Fr.

SOURCE:

PCT Int. Appl., 77 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| Р | ATE | NT 1 | NO. |     |     | KIN | D i | DATE |      | 1   | APPL | ICAT | ION : | NO. |     | D   | ATE  |     |
|---|-----|------|-----|-----|-----|-----|-----|------|------|-----|------|------|-------|-----|-----|-----|------|-----|
| _ |     |      |     |     |     |     | _   |      |      |     |      |      |       |     |     |     |      |     |
| W | o 9 | 967  | 231 |     |     | A1  |     | 1999 | 1229 | 1   | WO 1 | 999- | EP41  | 38  |     | 1   | 9990 | 615 |
|   |     | W:   | AL, | AU, | BA, | BB, | BG, | BR,  | CA,  | CN, | CU,  | CZ,  | EE,   | GE, | HR, | ΗU, | IL,  | IN, |
|   |     |      | IS, | JP, | ΚP, | KR, | LK, | LR,  | LT,  | LV, | MG,  | MK,  | MN,   | MX, | NO, | NΖ, | PL,  | RO, |
|   |     |      | RU, | SG, | SI, | SK, | TR, | TT,  | UA,  | US, | UZ,  | VN,  | YU,   | ZA, | AM, | ΑZ, | BY,  | KG, |
|   |     |      | ΚZ, | MD, | RU, | ТJ, | MT  |      |      |     |      |      |       |     |     |     |      |     |
|   |     | RW:  | GH, | GM, | KΕ, | LS, | MW, | SD,  | SL,  | SZ, | UG,  | ZW,  | AT,   | BE, | CH, | CY, | DE,  | DK, |
|   |     |      | ES, | FI, | FR, | GB, | GR, | ΙE,  | IT,  | LU, | MC,  | NL,  | PT,   | SE, | BF, | ВJ, | CF,  | CG, |
|   |     |      | CI, | CM, | GA, | GN, | G₩, | ML,  | MR,  | ΝE, | SN,  | TD,  | ΤG    |     |     |     |      |     |
| Ι | T 1 | 301  | 759 |     |     | В1  |     | 2000 | 0707 |     | IT 1 | 998- | MI14  | 80  |     | 1:  | 9980 | 619 |
| С | A 2 | 335  | 356 |     |     | AA  |     | 1999 | 1229 |     | CA 1 | 999- | 2335  | 356 |     | 1   | 9990 | 615 |

|          | 99451       |            |      |     | A1        |             |      | 110  | ΙĄ           | J : | 1999-  | 4513 | 9   |     |    | 19   | 990 | 615 |
|----------|-------------|------------|------|-----|-----------|-------------|------|------|--------------|-----|--------|------|-----|-----|----|------|-----|-----|
| EP       | 77038       | 953        |      |     | B2<br>A1  | 20          | 0010 | 219  | El           | 2   | 1999-  | 9279 | 90  |     |    | 19   | 990 | 615 |
| EP       | 10879<br>R: | 953<br>AT, | BE,  | CH, | B1<br>DE, | 20<br>DK, E |      | FR,  | GB, G        | GR, | , IT,  | LI,  | NL, | SE, | PΊ | ۲,   | IE, | SI, |
|          |             | LT,        | FΙ,  | RO  |           |             |      |      |              |     |        |      | _   |     |    |      |     |     |
| BR       | 99113       | 305        |      |     | Α         | 20          | 0011 | 1023 | BI           | ₹.  | 1999-  | 1130 | 5   |     |    | 1, 9 | 990 | 615 |
| JP       | 20025       | 51849      | 92   |     | Т2        | 20          | 0020 | 625  | J1           | ? ; | 2000-  | 5558 | 85  |     |    | 19   | 990 | 615 |
| RU       | 22350       | 97         |      |     | C2        | 20          | 0040 | 827  | RI           | J : | 2000-  | 1316 | 90  |     |    | 19   | 990 | 615 |
| AT       | 28260       | 00         |      |     | E         | 20          | 0041 | 215  | A:           | Г : | 1999-  | 9279 | 90  |     |    | 19   | 990 | 615 |
| ES       | 22342       | 265        |      |     | Т3        | 20          | 0050 | 616  | ES           | 3 : | 1999-  | 9279 | 90  |     |    | 19   | 990 | 615 |
| ZA       | 20000       | 00613      | 36   |     | Α         | 20          | 0020 | 130  | $\mathbf{z}$ | A : | 2000-  | 6136 |     |     |    | 20   | 001 | 030 |
| US       | 66459       | 965        |      |     | В1        | 20          | 0031 | .111 | US           | 3 2 | 2000-  | 7191 | 64  |     |    | 20   | 001 | 212 |
| US       | 20041       | 14757      | 75   |     | A1        | 20          | 0040 | 729  | US           | 3 2 | 2003-  | 6717 | 46  |     |    | 20   | 030 | 929 |
| PRIORITY | Y APPI      | LN. I      | INFO | . : |           |             |      |      | I            | r : | 1998-1 | MI14 | 80  |     | Α  | 19   | 980 | 619 |
|          |             |            |      |     |           |             |      |      | W            | ) : | 1999-  | EP41 | 38  |     | W  | 19   | 990 | 615 |
|          |             |            |      |     |           |             |      |      | US           | 3 2 | 2000-  | 7191 | 64  |     | А3 | 20   | 001 | 212 |

OTHER SOURCE(S): MARPAT 132:44979

- AB Nitric acid salts of drugs have antihypertensive activity. Some example salts prepared and showing antihypertensive activity were: timolol, propranolol, sildenafil, valsartan, hydralazine, nicardipine, verapamil, and amiloride nitrate salts.
- IT 252951-80-7

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (nitrate salts of antihypertensive medicines)

RN 252951-80-7 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester, nitrate (9CI) (CA INDEX NAME)

CM 1

CRN 116644-53-2 CMF C29 H38 F N3 O3

Absolute stereochemistry.

CM 2

CRN 7697-37-2 CMF H N O3

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 4 OF 13 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1999:104627 HCAPLUS

DOCUMENT NUMBER: 130:205140

TITLE: Potential-dependent, T-type calcium channel inhibitors

for treatment or prevention of pollakiuria or urinary

incontinence

INVENTOR(S): Narita, Kazuhisa; Koga, Ichiro; Okada, Atsushi

PATENT ASSIGNEE(S): Nippon Kayaku Co., Ltd., Japan SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO.  | DATE     |
|------------------------|------|----------|------------------|----------|
|                        |      |          |                  |          |
| JP 11035483            | A2   | 19990209 | JP 1998-128463   | 19980512 |
| PRIORITY APPLN. INFO.: |      |          | JP 1997-144503 A | 19970520 |

AB Potential-dependent, T-type calcium channel inhibitors e.g. [1S, 2S]-2-[2-[[3-[2-benzimidazolyl]propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-isopropyl-2-naphthylmethoxyacetate and 7-[4-[4,4'-difluorobenzohydryl]piperadino-1-methyl]-2-[[2-hydroxyethyl]amino]-4-isopropyl-2,4,6-cycloheptatrien-1-one for treatment or prevention of pollakiuria or urinary incontinence are claimed.

IT 220873-01-8

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(potential-dependent, T-type calcium channel inhibitors for treatment or prevention of pollakiuria or urinary incontinence)

RN 220873-01-8 HCAPLUS

CN Ethanone, 1-[(1S,2S)-2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl]-2-methoxy- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L40 ANSWER 5 OF 13 HCAPLUS COPYRIGHT 2006 ACS on STN ACCESSION NUMBER: 1998:721683 HCAPLUS

DOCUMENT NUMBER: 129:330729

TITLE: Preparation of mibefradil I.

INVENTOR(S): Fleming, Michael Paul; Harrington, Peter John

PATENT ASSIGNEE(S): F. Hoffmann-La Roche A.-G., Switz.

SOURCE: PCT Int. Appl., 21 pp.

CODEN: PIXXD2

DOCUMENT TYPE:

Patent English

LANGUAGE: Engli FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PA'     | rent  | NO.     |      |     | KIN | D   | DATE |      |     | APPL | ICAT  | ION  | NO. |     | Dž  | ATE  |     |
|---------|-------|---------|------|-----|-----|-----|------|------|-----|------|-------|------|-----|-----|-----|------|-----|
| WO      | 9849  | <br>149 |      |     | A1  |     | 1998 | 1105 | 1   | WO 1 | 998-1 | EP24 | 16  |     | 1:  | 9980 | 423 |
|         | W:    | AL,     | AM,  | ΑT, | ΑU, | ΑZ, | BA,  | BB,  | BG, | BR,  | BY,   | CA,  | CH, | CN, | CU, | CZ,  | DE, |
|         |       | DK,     | EE,  | ES, | FΙ, | GB, | GE,  | GH,  | GM, | GW,  | HU,   | ID,  | IL, | IS, | JP, | ΚE,  | KG, |
|         |       | ΚP,     | KR,  | ΚZ, | LC, | LK, | LR,  | LS,  | LT, | LU,  | LV,   | MD,  | MG, | MK, | MN, | MW,  | MX, |
|         |       | NO,     | ΝZ,  | PL, | PT, | RO, | RU,  | SD,  | SE, | SG,  | SI,   | SK,  | SL, | ТJ, | TM, | TR,  | TT, |
|         |       | UA,     | UG,  | UZ, | VN, | YU, | ZW,  | AM,  | AZ, | BY,  | KG,   | KZ,  | MD, | RU, | ТJ, | TM   |     |
|         | RW:   | GH,     | GM,  | KE, | LS, | MW, | SD,  | SZ,  | ŪG, | ZW,  | AT,   | BE,  | CH, | CY, | DE, | DK,  | ES, |
|         |       | FI,     | FR,  | GB, | GR, | IE, | IT,  | LU,  | MC, | NL,  | PT,   | SE,  | BF, | ВJ, | CF, | CG,  | CI, |
|         |       | CM,     | GA,  | GN, | ML, | MR, | NE,  | SN,  | TD, | TG   |       |      |     |     |     |      |     |
| AU      | 9876  | 477     |      |     | A1  |     | 1998 | 1124 |     | AU 1 | 998-  | 7647 | 7   |     | 1   | 9980 | 423 |
| PRIORIT | Y APP | LN.     | INFO | . : |     |     |      |      |     | US 1 | 997-  | 4515 | 1 P |     | P 1 | 9970 | 430 |
|         |       |         |      |     |     |     |      |      | ,   | WO 1 | 998-  | EP24 | 16  | 1   | W 1 | 9980 | 423 |

# OTHER SOURCE(S): CASREACT 129:330729

AB 2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1-isopropyl-1,2,3,4-tetrahydronaphthalen-2-yl methoxyacetate was prepared by reducing N-[3-(1H-benzimidazol-2-yl)propyl]-2-(6-fluoro-2-hydroxy-1-isopropyl-1,2,3,4-tetrahydronaphthalen-2-yl)-N-methylacetamide to give 2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1-isopropyl-1,2,3,4-tetrahydronaphthalen-2-ol and contacting the latter with MeOCH2CO2H or an activated derivative thereof.

IT 213272-70-9P, 2-[2-[[3-(1H-Benzimidazol-2yl)propyl]methylamino]ethyl]-6-fluoro-1-isopropyl-1,2,3,4tetrahydronaphthalen-2-yl methoxyacetate 213272-71-0P,
2-[2-[[3-(1H-Benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1isopropyl-1,2,3,4-tetrahydronaphthalen-2-yl methoxyacetate dihydrochloride
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
(Preparation)

(preparation of mibefradil)

RN 213272-70-9 HCAPLUS

CN Acetic acid, methoxy-, 2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{MeO-CH}_2\text{-C-O} \\ & \text{NH} & \text{(CH}_2)_3\text{-N-CH}_2\text{-CH}_2 \\ & \text{Me} \end{array}$$

RN 213272-71-0 HCAPLUS

CN Acetic acid, methoxy-, 2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

# ●2 HC1

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 6 OF 13 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:721682 HCAPLUS

DOCUMENT NUMBER: 129:343493

TITLE: Preparation of mibefradil II.

INVENTOR(S): Harrington, Peter John; Wong, Jim-wah PATENT ASSIGNEE(S): F. Hoffmann-La Roche A.-G., Switz.

SOURCE: PCT Int. Appl., 22 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

|      | PATENT NO. |        |                  | KIND DATE |      |       | APPLICATION NO. |      |      |      | DATE |      |       |      |      |      |      |        |
|------|------------|--------|------------------|-----------|------|-------|-----------------|------|------|------|------|------|-------|------|------|------|------|--------|
|      | WO         | 9849   | - <b></b><br>148 |           |      | A1    | _               | 1998 | 1105 | ,    |      |      |       |      |      | 1    | 9980 | 423    |
|      |            | W:     | AL,              | AM,       | AT,  | ΑU,   | ΑZ,             | BA,  | BB,  | ВG,  | BR,  | BY,  | CA,   | CH,  | CN,  | CU,  | CZ,  | DE,    |
|      |            |        | DK,              | EE,       | ES,  | FI,   | GB,             | GE,  | GH,  | GM,  | GW,  | ΗU,  | ID,   | ΙL,  | IS,  | JP,  | ΚE,  | KG,    |
|      |            |        | ΚP,              | KR,       | ΚZ,  | LC,   | LK,             | LR,  | LS,  | LT,  | LU,  | LV,  | MD,   | MG,  | MK,  | MN,  | MW,  | MX,    |
|      |            |        | NO,              | ΝZ,       | PL,  | PT,   | RO,             | RU,  | SD,  | SE,  | SG,  | SI,  | SK,   | SL,  | ТJ,  | TM,  | TR,  | TT,    |
|      |            |        | UA,              | UG,       | UZ,  | VN,   | YU,             | ZW,  | AM,  | ΑZ,  | BY,  | KG,  | ΚZ,   | MD,  | RU,  | ТJ,  | TM   |        |
|      |            | RW:    | GH,              | GM,       | KE,  | LS,   | MW,             | SD,  | SZ,  | UG,  | ZW,  | AT,  | BE,   | CH,  | CY,  | DE,  | DK,  | ES,    |
|      |            |        | FΙ,              | FR,       | GB,  | GR,   | ΙE,             | ΙΤ,  | LU,  | MC,  | NL,  | PT,  | SE,   | BF,  | ВJ,  | CF,  | CG,  | CI,    |
|      |            |        | CM,              | GΑ,       | GN,  | ML,   | MR,             | NE,  | SN,  | TD,  | TG   |      |       |      |      |      |      |        |
|      | ΑU         | 9879   | 092              |           |      | A1    |                 | 1998 | 1124 |      | AU 1 | 998- | 7909  | 2    |      | 1    | 9980 | 423    |
| PRIO | RIT:       | Y APP  | LN.              | INFO      | .:   |       |                 |      |      |      |      |      |       | 5 P  |      | P 1  |      |        |
|      |            |        |                  |           |      |       |                 |      |      |      | WO 1 | 998- | EP24  | 15   | 1    | W 1  | 9980 | 423    |
| OTHE |            | DURCE  |                  |           |      |       |                 |      |      |      |      |      |       |      |      |      |      |        |
| AB   |            | proce  |                  |           |      |       |                 |      |      |      |      |      |       |      |      |      |      |        |
|      |            | ) prop |                  |           |      |       |                 |      |      |      |      |      |       |      |      |      |      |        |
|      |            | trahy  |                  |           |      |       |                 |      |      |      |      |      |       |      |      |      |      |        |
|      | (6-        | -fluo  | ro-2             | -hyd:     | roxy | -1-i: | sopr            | opyl | -1,2 | ,3,4 | - te | trah | ydro: | naph | thal | en-2 | -yl) | acetic |
|      |            | id or  |                  |           |      |       |                 |      |      |      |      |      |       |      |      |      |      |        |
|      |            | )prop  |                  |           |      |       |                 |      |      |      |      |      |       |      |      |      |      | (6-    |
|      | flι        | oro-   | 2-hy             | drox      | y-1- | isop: | ropy            | 1-1, | 2,3, | 4-te | trah | ydro | naph  | thal | en-2 | -yl) | -N-  |        |
|      |            | thyla  |                  |           |      |       |                 |      |      |      |      |      |       |      |      |      |      |        |
| ΙT   |            | 3272-  |                  |           |      |       |                 |      |      |      |      |      |       |      |      |      |      |        |
|      | am:        | ino}e  | thyl             | ]-6-      | fluo | ro-1  | -iso            | prop | yl-1 | ,2,3 | ,4-t | etra | hydr  | onap | htha | len- | 2-yl |        |
|      | met        | thoxy  | acet             | ate       |      |       |                 |      |      |      |      |      |       |      |      |      |      |        |

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP

```
(Preparation)
```

(preparation of mibefradil)

RN 213272-70-9 HCAPLUS

CN Acetic acid, methoxy-, 2-[2-[[3-(1H-benzimidazol-2yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester (9CI) (CA INDEX NAME)

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 7 OF 13 HCAPLUS COPYRIGHT 2006 ACS on STN

1998:721681 HCAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 129:343492

TITLE: Preparation of mibefradil III.

INVENTOR(S): Harrington, Peter John; Wong, Jim-wah F. Hoffmann-La Roche A.-G., Switz. PATENT ASSIGNEE(S):

SOURCE: PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent English LANGUAGE:

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PAT              | ENT  | NO.     |      |     | KIN             | D   | DATE |      | 1      | APPL | ICAT  | ION I | NO. |     | D.  | ATE  |     |  |
|------------------|------|---------|------|-----|-----------------|-----|------|------|--------|------|-------|-------|-----|-----|-----|------|-----|--|
| WO               | 9849 | <br>147 |      |     | A1              | _   | 1998 | 1105 | 1      | WO 1 | 998-1 | EP24  | 06  |     | 1   | 9980 | 423 |  |
|                  | W:   | AL,     | AM,  | ΑT, | ΑU,             | ΑZ, | BA,  | BB,  | BG,    | BR,  | BY,   | CA,   | CH, | CN, | CU, | CZ,  | DE, |  |
|                  |      | DK,     | EE,  | ES, | FΙ,             | GB, | GE,  | GH,  | GM,    | GW,  | HU,   | ID,   | IL, | IS, | JP, | ΚE,  | KG, |  |
|                  |      | ΚP,     | KR,  | ΚZ, | LC,             | LK, | LR,  | LS,  | LT,    | LU,  | LV,   | MD,   | MG, | MK, | MN, | MW,  | MX, |  |
|                  |      | NO,     | NΖ,  | PL, | PT,             | RO, | RU,  | SD,  | SE,    | SG,  | SI,   | SK,   | SL, | ТJ, | TM, | TR,  | TT, |  |
|                  |      | UA,     | UG,  | UZ, | VN,             | YU, | ZW,  | ΑM,  | ΑZ,    | BY,  | KG,   | ΚZ,   | MD, | RU, | ТJ, | TM   |     |  |
|                  | RW:  | GH,     | GM,  | KΕ, | LS,             | MW, | SD,  | SZ,  | UG,    | ZW,  | AT,   | BE,   | CH, | CY, | DE, | DK,  | ES, |  |
|                  |      | FΙ,     | FR,  | GB, | GR,             | ΙE, | IT,  | LU,  | MC,    | NL,  | PT,   | SE,   | BF, | ВJ, | CF, | CG,  | CI, |  |
|                  |      | CM,     | GΑ,  | GN, | ML,             | MR, | ΝE,  | SN,  | TD,    | TG   |       |       |     |     |     |      |     |  |
| AU               | 9876 | 473     |      |     | A1              |     | 1998 | 1124 |        | AU 1 | 998-  | 7647  | 3   |     | 1   | 9980 | 423 |  |
| PRIORITY         | APP  | LN.     | INFO | .:  |                 |     |      |      | 1      | US 1 | 997-  | 4515  | 0 P |     | P 1 | 9970 | 430 |  |
|                  |      |         |      |     |                 |     |      |      | 1      | WO 1 | 998-  | EP24  | 06  | I   | W 1 | 9980 | 423 |  |
| OTHER SOURCE/S/. |      |         |      |     | CASREACT 129.34 |     |      |      | 313102 |      |       |       |     |     |     |      |     |  |

CASREACT 129:343492 OTHER SOURCE(S):

2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1isopropyl-1,2,3,4-tetrahydronaphthalen-2-yl methoxyacetate was prepared by contacting [3-(1H-benzimidazol-2-yl)propyl]methylamine with (6-fluoro-2-hydroxy-1-isopropyl-1,2,3,4-tetrahydronaphthalen-2yl)acetonitrile in the presence of H2 and a hydrogenation catalyst, followed by contacting the resulting 2-[2-[[3-(1H-benzimidazol-2yl)propyl]methylamino]ethyl]-6-fluoro-1-isopropyl-1,2,3,4tetrahydronaphthalen-2-ol with MeOCH2CO2H or an activated derivative thereof.

IT 213272-70-9P, 2-[2-[[3-(1H-Benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1-isopropyl-1,2,3,4-

tetrahydronaphthalen-2-yl methoxyacetate

RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP (Preparation)

(preparation of mibefradil)

213272-70-9 HCAPLUS RN

CN Acetic acid, methoxy-, 2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c} \text{MeO-CH}_2\text{-C-O} \\ \text{NH} \\ \text{NH} \end{array}$$

REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 8 OF 13 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1998:618399 HCAPLUS

DOCUMENT NUMBER: 129:245150

TITLE: Improved preparation of mibefradil via an acetonitrile

anion

INVENTOR(S): Wong, Jim-wah; Harrington, Peter J.

PATENT ASSIGNEE(S): Roche Colorado Corp., USA

SOURCE: U.S., 6 pp. CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
|                        |      |          |                 |          |
| US 5811557             | Α    | 19980922 | US 1998-60401   | 19980414 |
| PRIORITY APPLN. INFO.: |      |          | US 1998-60401   | 19980414 |
|                        |      |          |                 |          |

OTHER SOURCE(S): CASREACT 129:245150

GI

AB A method of preparing 2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1-isopropyl-1,2,3,4-tetrahydronaphthalen-2-yl methoxyacetate (I) comprises contacting 6-fluoro-1-isopropyl-3,4-dihydro-1H-naphthalen-2-one with the anion of acetonitrile in an aprotic polar solvent, contacting the thus-formed (6-fluoro-2-hydroxy-1-isopropyl-1,2,3,4-tetrahydronaphthalen-2-yl) acetonitrile (II) with [3-(1H-benzimidazol-2-yl)propyl]methylamine(III) in the presence of hydrogen and a hydrogenation catalyst, and finally esterifying the obtained 2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1-isopropyl-1,2,3,4-tetrahydronaphthalen-2-ol with methoxyacetic acid or an activated derivative of it. The invention is particularly applicable to the preparation of the antihypertensive mibefradil, namely (1S,2S)-I, and its di-HCl salt. The intermediate nitrile II is a new compound

IT 213272-70-9P, 2-[2-[[3-(1H-Benzimidazol-2yl)propyl]methylamino]ethyl]-6-fluoro-1-isopropyl-1,2,3,4tetrahydronaphthalen-2-yl methoxyacetate
RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP
(Preparation)

(improved preparation of mibefradil via an acetonitrile anion)

RN 213272-70-9 HCAPLUS

CN Acetic acid, methoxy-, 2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & O & i-Pr \\ & & MeO-CH_2-C-O \\ \hline & NH & (CH_2)_3-N-CH_2-CH_2 \\ \hline & Me \\ \end{array}$$

REFERENCE COUNT:

11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 9 OF 13 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

1998:618398 HCAPLUS

DOCUMENT NUMBER:

129:245149

TITLE:

Improved preparation of mibefradil via a

Ι

naphthalenylacetic acid

INVENTOR(S):

Harrington, Peter J.; Wong, Jim-wah

PATENT ASSIGNEE(S):

Roche Colorado Corp., USA

SOURCE:

U.S., 7 pp.

CODEN: USXXAM

DOCUMENT TYPE:

LANGUAGE:

Patent

English

FAMILY ACC. NUM. COUNT:

| PATENT | INFORMATION: |
|--------|--------------|
|        |              |

| PATENT NO.             | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------|------|----------|-----------------|----------|
|                        |      |          |                 |          |
| US 5811556             | Α    | 19980922 | US 1998-60168   | 19980414 |
| PRIORITY APPLN. INFO.: |      |          | US 1998-60168   | 19980414 |
|                        |      |          |                 |          |

OTHER SOURCE(S):

CASREACT 129:245149

GT

A method of preparing 2-[2-[[3-(1H-benzimidazol-2-AR yl)propyl]methylamino]ethyl]-6-fluoro-1-isopropyl-1,2,3,4tetrahydronaphthalen-2-yl methoxyacetate (I) comprises contacting (6-fluoro-2-hydroxy-1-isopropyl-1,2,3,4-tetrahydronaphthalen-2-yl)acetic acid (II) or an activated derivative with [3-(1H-benzimidazol-2yl)propyl]methylamine(III), reducing the formed amide function to a tertiary amine, and esterifying the obtained hydroxy amine with methoxyacetic acid or an activated derivative of it. The invention is particularly applicable to the preparation of the antihypertensive mibefradil, i.e., (1S,2S)-I, and its di-HCl salt. The intermediate amide, namely N-[3-(1H-benzimidazol-2-yl)propyl]-2-(6-fluoro-2-hydroxy-1-isopropyl-1,2,3,4-tetrahydronaphthalen-2-yl)-N-methylacetamide, is a new compound ΙT 213272-70-9P, 2-[2-[[3-(1H-Benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1-isopropyl-1,2,3,4tetrahydronaphthalen-2-yl methoxyacetate 213272-71-0P, 2-[2-[[3-(1H-Benzimidazol-2-vl)propvl]methylamino]ethyl]-6-fluoro-1isopropyl-1,2,3,4-tetrahydronaphthalen-2-yl methoxyacetate dihydrochloride RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP

(Preparation)

(preparation of mibefradil via a naphthalenylacetic acid)

RN 213272-70-9 HCAPLUS

CN Acetic acid, methoxy-, 2-[2-[[3-(1H-benzimidazol-2yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester (9CI) (CA INDEX NAME)

$$\begin{array}{c|c} & \text{MeO-CH}_2\text{-C-O} \\ \hline \\ & \text{NH} \end{array} \begin{array}{c} \text{MeO-CH}_2\text{-CH}_2 \\ \text{Me} \end{array}$$

RN 213272-71-0 HCAPLUS

Acetic acid, methoxy-, 2-[2-[[3-(1H-benzimidazol-2-CN yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

●2 HC1

REFERENCE COUNT: THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS 11

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L40 ANSWER 10 OF 13 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

1997:424055 HCAPLUS

DOCUMENT NUMBER:

127:144696

TITLE:

Metabolism of the calcium antagonist, mibefradil (POSICOR, Ro 40-5967). Part III. Comparative pharmacokinetics of mibefradil and its major

metabolites in rat, marmoset, cynomolgus monkey and

AUTHOR(S):

Wiltshire, H. R.; Sutton, B. M.; Heeps, G.; Betty, A. M.; Angus, D. W.; Harris, S. R.; Worth, E.; Welker, H.

Α.

CORPORATE SOURCE:

Department of Pharmacokinetics and Metabolism, Roche

Products Ltd, Welwyn Garden City, AL7 3AY, UK

SOURCE:

AΒ

Xenobiotica (1997), 27(6), 557-571 CODEN: XENOBH; ISSN: 0049-8254

PUBLISHER:

Taylor & Francis

DOCUMENT TYPE:

Journal

English

LANGUAGE:

1. The metabolism of mibefradil has been examined in rat, marmoset, cynomolgus monkey and man after single and multiple oral administration. 2.

Metabolites typically represent between 50 and 80% of the circulating drug-related material after single oral doses of mibefradil to man, rat and marmoset. They arise by a combination of enzymic processes: cytochrome P 450-mediated oxidation at saturated and unsatd. carbon atoms, cytochrome P 450-catalyzed dealkylation and hydrolysis of the ester side-chain. 3. Plasma levels of mibefradil in the cynomolgus monkey are extremely low as a result of very efficient first-pass hydrolysis of its side-chain to give the corresponding alc. Steady-state concns. of this metabolite are comparable with those of the parent drug in man and marmoset, but are relatively low in rat plasma. 4. Hydroxylation at the benzylic carbon of the tetrahydronaphthyl ring leads to further important metabolites in primates, whereas the products of O- and N-demethylation are found in small amts. in all four species. 5. Ests. of the exposure of the various species to the principal metabolites indicate that the choice of the rat, marmoset and cynomolgus monkey for the toxicol. assessment of mibefradil was appropriate.

TΤ 193351-45-0

> RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)

(metabolism of the calcium antagonist mibefradil in humans and lab animals)

RN 193351-45-0 HCAPLUS

CN Acetic acid, methoxy-, 2-[2-[[3-(1H-benzimidazol-2yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-4-hydroxy-1-(1methylethyl)-2-naphthalenyl ester,  $[1S-(1\alpha, 2\alpha, 4\beta)]-(9CI)$ (CA INDEX NAME)

Absolute stereochemistry.

HCAPLUS COPYRIGHT 2006 ACS on STN L40 ANSWER 11 OF 13

1997:424054 HCAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 127:144695

TITLE: Metabolism of the calcium antagonist, mibefradil

> (POSICOR, Ro 40-5967). Part II. Metabolism in hepatic microsomes from rat, marmoset, cynomolgus monkey,

rabbit and man

AUTHOR(S): Wiltshire, H. R.; Sutton, B. M.; Heeps, G.; Betty, A.

M.; Angus, D. W.; Madigan, M. J.; Sharp, S. R.

Pharmacokinetics and Metabolism Department, Roche CORPORATE SOURCE:

Products Ltd, Welwyn Garden City, AL7 3AY, UK

SOURCE: Xenobiotica (1997), 27(6), 539-556

CODEN: XENOBH; ISSN: 0049-8254

PUBLISHER: Taylor & Francis

DOCUMENT TYPE: Journal LANGUAGE: English

The calcium antagonist, mibefradil, is converted to some 30 metabolites after incubation with hepatic microsomes from the rat, marmoset, cynomolgus monkey, rabbit and man. The wide inter-species differences in metabolic profile stem mainly from variations in the activity of the microsomal esterase, which hydrolyses the ester side-chain of mibefradil to give the alc. metabolite, Ro 40-5966. Hydrolysis is especially marked in

the

CN

cynomolgus monkey and rabbit, less in man and least in the rat and marmoset. The biotransformation of this alc. metabolite by cytochromes P 450 is more facile than that of the parent compound, leads to fewer metabolites and the metabolic profiles in all species are similar. The most important cytochrome P 450-mediated metabolic process in microsomes in all species is hydroxylation at the benzylic carbon atom of the tetrahydronaphthyl group; further oxidation of the resultant secondary alc. to a ketone also occurs. These reactions indicate the route of the biosynthetic pathway which leads to the major, naphthyl-glucuronide metabolites previously isolated from rat bile. Dealkylation of the tertiary amino group is also important and leads to compds. lacking either the N-Me group or the propylbenzimidazole moiety. Hydroxylation of the benzimidazole ring at both the 4- and 5-positions is largely restricted to mibefradil and does not occur to a significant extent with Ro 40-5966.

IT 144917-60-2 193351-45-0 193464-93-6 193464-95-8

RL: BSU (Biological study, unclassified); MFM (Metabolic formation); BIOL (Biological study); FORM (Formation, nonpreparative)

(metabolism of the calcium antagonist mibefradil in humans and lab animals)

RN 144917-60-2 HCAPLUS

Acetic acid, methoxy-, 6-fluoro-1,2,3,4-tetrahydro-2-[2-[[3-(5-hydroxy-1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-1-(1-methylethyl)-2-naphthalenyl ester, (1S-cis)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 193351-45-0 HCAPLUS

CN Acetic acid, methoxy-, 2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-4-hydroxy-1-(1-methylethyl)-2-naphthalenyl ester, [1S-(1 $\alpha$ ,2 $\alpha$ ,4 $\beta$ )]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 193464-93-6 HCAPLUS

CN Acetic acid, methoxy-, 2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-4-hydroxy-1-(1-methylethyl)-2-naphthalenyl ester, [1S-( $1\alpha$ ,  $2\alpha$ ,  $4\alpha$ )]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 193464-95-8 HCAPLUS

CN Acetic acid, methoxy-, 6-fluoro-1,2,3,4-tetrahydro-2-[2-[[3-(4-hydroxy-1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-1-(1-methylethyl)-2-naphthalenyl ester, (1S-cis)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L40 ANSWER 12 OF 13 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:15784 HCAPLUS

DOCUMENT NUMBER: 118:15784

TITLE: Metabolism of calcium antagonist Ro 40-5967: a case

history of the use of diode-array UV spectroscopy and thermospray-mass spectrometry in the elucidation of a

complex metabolic pathway

AUTHOR(S): Wiltshire, H. R.; Harris, S. R.; Prior, K. J.;

Kozlowski, U. M.; Worth, E.

CORPORATE SOURCE: Dep. Pharmacokinet. Metab., Roche Prod. Ltd., Welwyn

Garden City/Herts., AL7 3AY, UK

SOURCE: Xenobiotica (1992), 22(7), 837-57

CODEN: XENOBH; ISSN: 0049-8254

DOCUMENT TYPE: Journal LANGUAGE: English

AB The calcium antagonist, Ro 40-5967, is metabolized to a multitude of products by the rat and drug-related material is excreted predominantly via the bile. Diode-array, UV spectroscopy, following reverse phase HPLC separation of the partially purified metabolites, has been used to classify

these compds. into six spectral classes which have been correlated with different metabolic reactions. Connection of a mass spectrometer directly to the HPLC equipment by a thermospray interface, produced useful mass spectra. These, together with the UV spectra, enabled the structures of many metabolites to be elucidated. Confirmation of structural assignments was provided by NMR spectra of the major metabolites. Major metabolite pathways included N-demethylation (16% of the biliary metabolites), hydrolysis of the ester side-chain (32%), hydroxylation at 4- (19%) and 5- (29%) positions of the benzimidazole ring, aromatization of the tetrahydronaphthyl system (26%), loss of the benzimidazole (15%) and glucuronidation of hydroxyl groups (81%).

IT 144917-55-5 144917-60-2 144917-61-3 144917-69-1

RL: PROC (Process)

(as Ro 5967 metabolite, characterization of, by diode-array UV spectroscopy and thermospray-mass spectrometry)

RN 144917-55-5 HCAPLUS

CN

β-D-Glucopyranosiduronic acid, 2-[3-[[2-[6-fluoro-1,2,3,4-tetrahydro-2-[(methoxyacetyl)oxy]-1-(1-methylethyl)-2-naphthalenyl]ethyl]methylamino]propyl]-1H-benzimidazol-4-yl, (1S-cis)- (9CI) (CA INDEX NAME)

RN 144917-60-2 HCAPLUS

CN Acetic acid, methoxy-, 6-fluoro-1,2,3,4-tetrahydro-2-[2-[[3-(5-hydroxy-1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-1-(1-methylethyl)-2-naphthalenyl ester, (1S-cis)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN 144917-61-3 HCAPLUS

CN  $\beta$ -D-Glucopyranosiduronic acid, 2-[3-[[2-[6-fluoro-1,2,3,4-tetrahydro-2-[(methoxyacetyl)oxy]-1-(1-methylethyl)-2-naphthalenyl]ethyl]methylamino]

propyl]-1H-benzimidazol-5-yl, (1S-cis)- (9CI) (CA INDEX NAME)

RN 144917-69-1 HCAPLUS

CN β-D-Glucopyranosiduronic acid, 3-[2-[[3-(1H-benzimidazol-2yl)propyl]methylamino]ethyl]-7-fluoro-1,2,3,4-tetrahydro-3[(methoxyacetyl)oxy]-4-(1-methylethyl)-1-naphthalenyl (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L40 ANSWER 13 OF 13 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:549535 HCAPLUS

DOCUMENT NUMBER: 109:149535

TITLE: Preparation of [[(heterocyclylalkyl)amino]ethyl]tetrah

ydronaphthalenes as cardiovascular agents

INVENTOR(S): Branca, Quirico; Jaunin, Roland; Maerki, Hans Peter;

Marti, Fraenzi; Ramuz, Henri

PATENT ASSIGNEE(S): Hoffmann-La Roche, F., und Co. A.-G., Switz.

SOURCE: Eur. Pat. Appl., 37 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent LANGUAGE: German

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PATENT NO. KIND DATE APPLICATION NO. DATE

| EP :     | 268148   |         | A1  | 19880525 | EP 1987-116251        |    | 19871104 |
|----------|----------|---------|-----|----------|-----------------------|----|----------|
|          | 268148   |         | B1  | 19911211 |                       |    |          |
|          | R: AT,   | BE. CH. | DE. |          | GR, IT, LI, LU, NL, S | F. |          |
| DK       | 8705599  | ,,      | Α,  | 19880515 | DK 1987-5599          | _  | 19871026 |
|          | 171349   |         | В1  | 19960916 |                       |    | 230.2020 |
| CA       | 1319144  |         | A1  | 19930615 | CA 1987-550190        |    | 19871026 |
| CS :     | 264350   |         | B2  | 19890712 | CS 1987-7874          |    | 19871103 |
|          | 70267    |         | E   | 19911215 | AT 1987-116251        |    | 19871104 |
|          | 2040234  | ,       | Т3  | 19931016 | ES 1987-116251        |    | 19871104 |
| ZA       | 8708362  |         | Α   | 19880727 | ZA 1987-8362          |    | 19871106 |
|          | 8780909  |         | A1  | 19880519 | AU 1987-80909         |    | 19871109 |
| AU       | 600769   |         | В2  | 19900823 |                       |    |          |
| IL       | 84407    |         | A1  | 19910916 | IL 1987-84407         |    | 19871109 |
| JP       | 63139171 |         | A2  | 19880610 | JP 1987-282287        |    | 19871110 |
| JP :     | 2504490  |         | В2  | 19960605 |                       |    |          |
| US       | 4808605  |         | Α   | 19890228 | US 1987-119114        |    | 19871110 |
| HU       | 60251    |         | A2  | 19920828 | HU 1987-5011          |    | 19871111 |
| HU :     | 215915   |         | В   | 19990329 |                       |    |          |
| FI       | 8705024  |         | Α   | 19880515 | FI 1987-5024          |    | 19871113 |
| FI       | 94414    |         | В   | 19950531 |                       |    |          |
| FI       | 94414    |         | С   | 19950911 |                       |    |          |
| NO :     | 8704757  |         | Α   | 19880516 | NO 1987-4757          |    | 19871113 |
| NO       | 172237   |         | В   | 19930315 |                       |    |          |
| NO       | 172237   |         | С   | 19930623 |                       |    |          |
| CN       | 87107875 |         | Α   | 19880525 | CN 1987-107875        |    | 19871113 |
| CN       | 1028991  |         | В   | 19950621 |                       |    |          |
| PRIORITY | APPLN.   | INFO.:  |     |          | CH 1986-4565          | Α  | 19861114 |
|          |          |         |     |          | EP 1987-116251        | Α  | 19871104 |

OTHER SOURCE(S): MARPAT 109:149535

GΙ

$$R^3$$
 $CH_2CH_2NR^2X_nA$ 

The title compds. [I; A = substituted 2-(imidazol-2-yl)ethyl, (un)substituted benzimidazolyl, benzothiazolyl, etc.; R, R2 = alkyl; R1 = halo; R3 = OH, alkoxy, alkanoyloxy, alkoxyalkanoyloxy, etc.; X = C1-18 alkylene, optionally interrupted by 1,4-phenylene or -cyclohexylene; n = 0, 1] were prepared PhCH2O2CNMe(CH2)3CONHC6H4NH2-2 (preparation given) was refluxed 2 h in PhMe containing 4-MeC6H4SO3H and the product hydrogenolized over Pd/C to give 2-[3-(methylamino)propyl]benzimidazole which was heated 30 min at 120° in (Me2CH)2NEt with 2-(6-fluoro-1,2,3,4-tetrahydro-2-hydroxy-1 $\alpha$ -isopropyl-2 $\beta$ -naphthyl)ethyl p-toluenesulfonate to give title compound II (R3 = OH). The latter was stirred overnight with MeOCH2COCl in CHCl3 containing (Me2CH)2NEt to give II (R3 = MeOCH2CO2) (III)

Ι

which, at 0.3~mg/kg i.v., gave 25% and 86% increase in heart contractility and coronary blood flow, resp., in anesthetized dogs. Tablets were prepared each containing III 75, lactose 135, starch 70, Povidone K 30 15, talc 3, and Mg stearate 2 mg.

IT 116666-65-0P 116666-76-3P 116666-93-4P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of, as cardiovascular agent)

RN 116666-65-0 HCAPLUS

CN Acetic acid, methoxy-, 2-[2-[[5-(1H-benzimidazol-2-yl)pentyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester, dihydrochloride, (1S-cis)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

#### ●2 HC1

RN 116666-76-3 HCAPLUS

CN Acetic acid, methoxy-, 2-[2-[[4-(1H-benzimidazol-2-yl)butyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester, dihydrochloride, (1S-cis)- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

### ●2 HCl

RN 116666-93-4 HCAPLUS

CN Acetic acid, methoxy-,  $2-[2-[\{5-(1H-benzimidazol-2-yl)-1-methylpentyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester, dihydrochloride, [1S-[1<math>\alpha$ ,2 $\alpha$ ,2(R\*)]]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.

●2 HCl

=> d que stat 141

1 SEA FILE=REGISTRY ABB=ON PLU=ON 116644-53-2 .. L31

(L41 416 SEA FILE-HCAPLUS ABB=ON PLU=ON L31

=> d 141 ibib hitstr 1-5 400-416

L41 ANSWER 1 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:107381 HCAPLUS

DOCUMENT NUMBER: 144:121407

Relaxant responses to calcium channel antagonists and TITLE:

potassium channel opener in human saphenous vein

AUTHOR(S): Ford, C.; Bieger, D.; Mong, K.; Tabrizchi, R.

Division of Basic Medical Sciences, Faculty of CORPORATE SOURCE:

Medicine, Health Sciences Centre, Memorial University

of Newfoundland, St John's, NL, A1B 3V6, Can.

Autonomic & Autacoid Pharmacology (2006), 26(1), 7-13 SOURCE:

CODEN: AAPUC3; ISSN: 1474-8665

Blackwell Publishing Ltd. PUBLISHER:

DOCUMENT TYPE: Journal

English LANGUAGE:

116644-53-2, Mibefradil

RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU

(Therapeutic use); BIOL (Biological study); USES (Uses)

(relaxant responses to calcium channel antagonists and potassium

channel opener in human saphenous vein)

116644-53-2 HCAPLUS RN

Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-CN

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

REFERENCE COUNT:

26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 2 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

2006:100738 HCAPLUS

DOCUMENT NUMBER:

144:198849

TITLE:

Novel dosage form comprising modified-release and

immediate-release active ingredients

INVENTOR(S):

Vaya, Navin; Karan, Rajesh Singh; Sadanand, Sunil;

Gupta, Vinod Kumar

PATENT ASSIGNEE(S):

India

SOURCE:

U.S. Pat. Appl. Publ., 49 pp., Cont.-in-part of U.S.

Ser. No. 630,446.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

2

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO.             | KIND   | DATE     | APPLICATION NO. |    | DATE     |
|------------------------|--------|----------|-----------------|----|----------|
| US 2006024365          | <br>A1 | 20060202 | US 2005-134633  |    | 20050519 |
| US 2004096499          | A1     | 20040520 | US 2003-134633  |    | 20030319 |
| PRIORITY APPLN. INFO.: |        | 20010020 | IN 2002-MU697   | А  | 20020805 |
|                        |        |          | IN 2002-MU699   | Α  | 20020805 |
|                        |        |          | IN 2003-MU80    | Α  | 20030122 |
|                        |        |          | IN 2003-MU82    | Α  | 20030122 |
|                        |        |          | US 2003-630446  | A2 | 20030729 |

# IT 116644-53-2, Mibefradil

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (novel dosage form comprising modified-release and immediate-release active ingredients)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester (9CI) (CA INDEX NAME)

L41 ANSWER 3 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:56562 HCAPLUS

DOCUMENT NUMBER: 144:246907

TITLE: Inhibitory Effect of Efonidipine on Aldosterone

Synthesis and Secretion in Human Adrenocarcinoma

(H295R) Cells

AUTHOR(S): Imagawa, Keiichi; Okayama, Satoshi; Takaoka, Minoru;

Kawata, Hiroyuki; Naya, Noriyuki; Nakajima, Tamio;

Horii, Manabu; Uemura, Shiro; Saito, Yoshihiko

CORPORATE SOURCE: First Department of Internal Medicine, Nara Medical

University, Kashihara, Nara, Japan

SOURCE: Journal of Cardiovascular Pharmacology (2006), 47(1),

133-138

CODEN: JCPCDT; ISSN: 0160-2446
PUBLISHER: Lippincott Williams & Wilkins

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116644-53-2, Mibefradil

RL: BSU (Biological study, unclassified); BIOL (Biological study) (inhibitory effect of efonidipine on aldosterone synthesis and

secretion in human adrenocarcinoma cells)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

REFERENCE COUNT: 30 THERE A

THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 4 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2006:51871 HCAPLUS

DOCUMENT NUMBER: 144:121827

TITLE: Methods for preventing pressure-induced apoptotic

neural-cell death in glaucoma patients by

administering inhibitors of TREK-1 and TRAAK potassium

channels

INVENTOR(S):
Coroneo, Minas Theodore

PATENT ASSIGNEE(S): Davies Collison Cave, Australia

SOURCE: U.S. Pat. Appl. Publ., 13 pp., Cont.-in-part of U.S.

Ser. No. 84,604.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

|      | PATENT NO.                                 | KIND     | DATE          | APPLICATION NO.      |      | DATE           |
|------|--|----------|---------------|----------------------|------|----------------|
|      | US 2006013814                              | A1       | 20060119      | US 2005-171531       | -    | 20050630       |
|      | US 2002187919                              | A1       | 20021212      | US 2002-84604        |      | 20020227       |
| PRIO | RITY APPLN. INFO.:                         |          |               | US 2000-649643       | В1   | 20000829       |
|      |  |          |               | US 2002-84604        | В2   | 20020227       |
|      |  |          |               | AU 2000-9267         | Α    | 20000808       |
| ΙT   | 116644-53-2, Mibefr                        | adil     |               |                      |      |                |
|      | RL: PAC (Pharmacolo                        | gical ad | ctivity); THU | J (Therapeutic use); | BI   | OL             |
|      | (Biological study);                        | USES (   | Jses)         |                      |      |                |
|      | (methods for pre                           | venting  | pressure-ind  | duced apoptotic neur | al-d | cell death in  |
|      | glaucoma patient                           | s by adr | ministering : | inhibitors of TREK-1 | and  | d TRAAK        |
|      | potassium channe                           | ls)      |               |                      |      |                |
| RN   | 116644-53-2 HCAPLU                         | S        |               |                      |      |                |
| CN   | Acetic acid, methox                        |          |               |                      |      |                |
|      | yl)propyl]methylami<br>2-naphthalenyl este |          |               |                      | -(1  | -methylethyl)- |

Absolute stereochemistry.

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HCAPLUS COPYRIGHT 2006 ACS on STN
L41 ANSWER 5 OF 416
ACCESSION NUMBER:
                         2006:5456 HCAPLUS
DOCUMENT NUMBER:
                         144:205445
                         Antihypertensive Effects of the Putative T-Type
TITLE:
                         Calcium Channel Antagonist Mibefradil Are Mediated by
                         the L-Type Calcium Channel Cav1.2
AUTHOR(S):
                         Moosmang, Sven; Haider, Nicole; Bruederl, Birgit;
                         Welling, Andrea; Hofmann, Franz
CORPORATE SOURCE:
                         Institut fuer Pharmakologie und Toxikologie,
                         Technische Universitaet Muenchen, Germany
SOURCE:
                         Circulation Research (2006), 98(1), 105-110
                         CODEN: CIRUAL; ISSN: 0009-7330
PUBLISHER:
                         Lippincott Williams & Wilkins
DOCUMENT TYPE:
                         Journal
LANGUAGE:
                         English
IT
     116644-53-2, Mibefradil
     RL: DMA (Drug mechanism of action); PAC (Pharmacological activity); THU
     (Therapeutic use); BIOL (Biological study); USES (Uses)
        (antihypertensive effects of the putative T-type calcium channel
        antagonist mibefradil are mediated by the L-type calcium channel
        Cav1.2)
RN
     116644-53-2 HCAPLUS
```

Acetic acid, methoxy-, (1S,2S)-2-[2-[3-(1H-benzimidazol-2-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

CN

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L41 ANSWER 400 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:263166 HCAPLUS

DOCUMENT NUMBER: 124:332465

TITLE: Effect of mibefradil on left ventricular diastolic

function in patients with congestive heart failure

AUTHOR(S): Muntinga, H. J.; van der Vring, J. A. F. M.; Niemeyer,

M. G.; van den Berg, F.; Knol, H. R.; Bernink, P. J. L. M.; van der Wall, E. E.; Blanksma, P. K.; Lie, K.

I.

CORPORATE SOURCE: Dep. Cardiology, Martini Hospital, Groningen, 9700 RM,

Neth.

SOURCE: Journal of Cardiovascular Pharmacology (1996), 27(5),

652-6

CODEN: JCPCDT; ISSN: 0160-2446

PUBLISHER: Lippincott-Raven

DOCUMENT TYPE: Journal LANGUAGE: English

IT **116644-53-2**, Mibefradil

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU

(Therapeutic use); BIOL (Biological study); USES (Uses)

(effect of mibefradil on left ventricular diastolic function in

patients with congestive heart failure)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L41 ANSWER 401 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:205846 HCAPLUS

DOCUMENT NUMBER: 124:278618

TITLE: Antihypertensive properties of the novel calcium

antagonist mibefradil (Ro 40-5967): A new generation

of calcium antagonists?

AUTHOR(S): Bernink, Peter J. L. M.; Prager, Gerold; Schelling,

Arie; Kobrin, Isaac

CORPORATE SOURCE: Martini Ziekenhuis, Groningen, 9721 5W, Neth.

SOURCE: Hypertension (Dallas) (1996), 27(3, Pt. 1), 426-32

CODEN: HPRTDN; ISSN: 0194-911X

PUBLISHER: American Heart Association

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116644-53-2, Mibefradil

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(antihypertensive properties of the novel calcium antagonist mibefradil

(Ro 40-5967): a new generation of calcium antagonists)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L41 ANSWER 402 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:138785 HCAPLUS

DOCUMENT NUMBER: 124:250257

TITLE: Effects of a new calcium antagonist, mibefradil (Ro

40-5967), on silent ischemia in patients with stable

chronic angina pectoris: A multicenter

placebo-controlled study

AUTHOR(S): Braun, Shimon; Van Der Wall, Ernst E.; Emanuelsson,

Haken; Kobrin, Isaak

CORPORATE SOURCE: Department Cardiology, Tel-Aviv Medical Center, Tel

Aviv-Jaffa, 64239, Israel

SOURCE: Journal of the American College of Cardiology (1996),

27(2), 317-22

CODEN: JACCDI; ISSN: 0735-1097

PUBLISHER: Elsevier DOCUMENT TYPE: Journal LANGUAGE: English

IT 116644-53-2, Mibefradil

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(effects of a new calcium antagonist, mibefradil (Ro 40-5967), on silent ischemia in human patients with stable chronic angina pectoris)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L41 ANSWER 403 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:115986 HCAPLUS

DOCUMENT NUMBER: 124:219315

TITLE: Hemodynamics, cardiac conduction and pharmacokinetics

of mibefradil (Ro 40-5967), a novel calcium antagonist

AUTHOR(S): Petrie, John R.; Glen, Stephen K.; MacMahon, Mark;

Crome, Renata; Meredith, Peter A.; Elliott, Henry L.;

Reid, John L.

CORPORATE SOURCE: Department Medicine and Therapeutics, Western

Infirmary, Glasgow, Gl1 6NT, UK

SOURCE: Journal of Hypertension (1995), 13(12, Pt. 2), 1842-6

CODEN: JOHYD3; ISSN: 0263-6352

PUBLISHER: Current Science

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116644-53-2, Mibefradil

RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use);

BIOL (Biological study); PROC (Process); USES (Uses)

(hemodynamics, cardiac conduction and pharmacokinetics of mibefradil

(Ro 40-5967), a novel calcium antagonist, in humans)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L41 ANSWER 404 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:36342 HCAPLUS

DOCUMENT NUMBER: 124:135217

TITLE: Effects of mibefradil on intracellular Ca2+ release in

cultured rat cardiac fibroblasts and human platelets

AUTHOR(S): Eberhard, Marc; Miyagawa, Koichi; Hermsmeyer, Kent;

Erne, Paul

CORPORATE SOURCE: Dep. Res., Kantonsspital, Basel, CH-4031, Switz.

SOURCE: Naunyn-Schmiedeberg's Archives of Pharmacology (1995),

353(1), 94-101

CODEN: NSAPCC; ISSN: 0028-1298

PUBLISHER: Springer
DOCUMENT TYPE: Journal
LANGUAGE: English

IT 116644-53-2, Mibefradil

RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); BIOL (Biological study)

(mibefradil effect on calcium release in cardiac fibroblasts and human

platelets)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L41 ANSWER 405 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:31775 HCAPLUS

DOCUMENT NUMBER: 124:44687

TITLE: Nonlinear Pharmacokinetics of Mibefradil in the Dog

AUTHOR(S): Skerjanec, Andrej; Tawfik, Soheir; Tam, Yun K. CORPORATE SOURCE: Faculty of Pharmacy and Pharmaceutical Sciences, University of Alberta, Edmonton, AB, T6G 2N8, Can.

Journal of Pharmaceutical Sciences (1996), 85(2),

SOURCE: Journa 189-92

CODEN: JPMSAE; ISSN: 0022-3549

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal LANGUAGE: English

IT **116644-53-2**, Mibefradil

RL: BPR (Biological process); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(nonlinear pharmacokinetics of mibefradil in the dog)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

L41 ANSWER 406 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:29294 HCAPLUS

DOCUMENT NUMBER: 124:105447

TITLE: Two stable cell lines for screening of calcium channel

blockers

AUTHOR(S): Seisenberger, Claudia; Welling, Andrea; Schuster,

Angela; Hofmann, Franz

CORPORATE SOURCE: Inst. Pharmakologie und Toxikologie, TU Muenchen,

Munich, D-80802, Germany

SOURCE: Naunyn-Schmiedeberg's Archives of Pharmacology (1995),

352(6), 662-9

CODEN: NSAPCC; ISSN: 0028-1298

PUBLISHER: Springer
DOCUMENT TYPE: Journal
LANGUAGE: English

IT **116644-53-2**, Mibefradil

RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); BIOL (Biological study)

(two stable cell lines for screening of calcium channel blockers)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (15,25)-2-[2-[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L41 ANSWER 407 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1996:28720 HCAPLUS

DOCUMENT NUMBER: 124:106113

TITLE: Mechanism of the antiischemic effect of mibefradil, a

selective T calcium channel blocker in dogs:

comparison with amlodipine

AUTHOR(S): Roux, Sebastien; Buehler, Manfred; Clozel, Jean-Paul

CORPORATE SOURCE: Pharma Division, F. Hoffmann-La Roche Ltd., Basel,

CH-4002, Switz.

SOURCE: Journal of Cardiovascular Pharmacology (1996), 27(1),

132-9

CODEN: JCPCDT; ISSN: 0160-2446

PUBLISHER: Lippincott-Raven

DOCUMENT TYPE: Journal LANGUAGE: English IT 116644-53-2, Mibefradil

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(mechanism of the antiischemic effect of mibefradil, a selective T calcium channel blocker in dogs: comparison with amlodipine)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L41 ANSWER 408 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:941601 HCAPLUS

DOCUMENT NUMBER: 124:52435

TITLE: Structural changes and cyclic GMP content of the aorta

after calcium antagonism or angiotensin converting enzyme inhibition in renovascular hypertensive rats Veniant, Murielle; Gray, Gillian A.; Heudes, Didier;

Menard, Joel; Clozel, Jean-Paul

CORPORATE SOURCE: Pharma Division, Preclinical Research, F. Hoffmann-La

Roche Ltd, Basel, Switz.

SOURCE: Journal of Hypertension (1995), 13(7), 731-7

CODEN: JOHYD3; ISSN: 0263-6352

PUBLISHER: Current Science

DOCUMENT TYPE: Journal LANGUAGE: English IT 116644-53-2, Mibefradil

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES

(cGMP content and structural changes of aorta after calcium antagonism or angiotensin converting enzyme inhibition in renovascular

hypertensive rats)

RN 116644-53-2 HCAPLUS

AUTHOR(S):

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

L41 ANSWER 409 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:911235 HCAPLUS

DOCUMENT NUMBER: 124:21374

TITLE: Effects of the new calcium antagonist mibefradil (Ro

40-5967) on exercise duration in patients with chronic

stable angina pectoris: A multicenter,

placebo-controlled study

AUTHOR(S): Bakx, Ad L. M.; van der Wall, Ernst E.; Braun, Shimon;

Emanuelsson, Hakan; Bruschke, Albert V. G.; Kobrin,

Isaac

CORPORATE SOURCE: University Hospital, Leiden, Neth.

SOURCE: American Heart Journal (1995), 130(4), 748-57

CODEN: AHJOA2; ISSN: 0002-8703

PUBLISHER: Mosby-Year Book

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116644-53-2, Mibefradil

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(effects of the new calcium antagonist mibefradil (Ro 40-5967) on exercise duration in human patients with chronic stable angina pectoris)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L41 ANSWER 410 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:865388 HCAPLUS

DOCUMENT NUMBER: 123:329616

TITLE: The block of the expressed L-type calcium channel is

modulated by the  $\beta 3$  subunit

AUTHOR(S): Lacinova, L.; Ludwig, A.; Bosse, E.; Flockerzi, V.;

Hofmann, F.

CORPORATE SOURCE:

Institut fuer Pharmakologie and Toxikologie TU

Muenchen, Biedersteiner Str. 29, 80802, Munchen,

Germany

SOURCE:

FEBS Letters (1995), 373(2), 103-7

CODEN: FEBLAL; ISSN: 0014-5793

PUBLISHER: DOCUMENT TYPE: Elsevier Journal

LANGUAGE:

English

IT 116644-53-2, Mibefradil

RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); BIOL (Biological study)

(block of the expressed L-type calcium channel is modulated by the

β3 subunit)

116644-53-2 HCAPLUS RN

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L41 ANSWER 411 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER:

1995:846309 HCAPLUS

DOCUMENT NUMBER:

123:275587

TITLE:

Voltage-dependent blockade of diverse types of voltage-gated Ca2+ channels expressed in Xenopus oocytes by the Ca2+ channel antagonist mibefradil (Ro

40-5967)

AUTHOR(S):

Bezprozvanny, I.; Tsien, R. W.

CORPORATE SOURCE:

Dep. Mol. Cellular Physiology, Stanford University

Medical Center, Stanford, CA, 94305, USA Molecular Pharmacology (1995), 48(3), 540-9

CODEN: MOPMA3; ISSN: 0026-895X

PUBLISHER:

SOURCE:

Williams & Wilkins

DOCUMENT TYPE:

Journal

LANGUAGE:

English

TΤ 116644-53-2, Mibefradil

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(voltage-dependent blockade of diverse types of voltage-gated Ca2+ channels expressed in Xenopus oocytes by mibefradil)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S, 2S)-2-[2-[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

L41 ANSWER 412 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:755107 HCAPLUS

DOCUMENT NUMBER: 123:188106

TITLE: Mibefradil prevents neointima formation after vascular

injury in rats: possible role of the blockade of the

T-type voltage-operated calcium channel

AUTHOR(S): Schmitt, R.; Clozel, J.-P.; Iberg, N.; Buehler, F. R.

CORPORATE SOURCE: Pharma Div., F. Hoffmann-La Roche Ltd., Basel,

CH-4002, Switz.

SOURCE: Arteriosclerosis, Thrombosis, and Vascular Biology

(1995), 15(8), 1161-5

CODEN: ATVBFA; ISSN: 1079-5642

PUBLISHER: American Heart Association

DOCUMENT TYPE: Journal LANGUAGE: English IT 116644-53-2, Mibefradil

RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); BIOL (Biological study)

(role of calcium T-channels in blockade of injury-induced artery

neointima formation by mibefradil)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L41 ANSWER 413 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:719615 HCAPLUS

DOCUMENT NUMBER: 123:132462

TITLE: Differential effects of the calcium antagonist

mibefradil in epicardial and intramyocardial coronary

arteries

AUTHOR(S): Kueng, Christoph F.; Tschudi, Marcel R.; Noll, Georg;

Clozel, Jean-Paul; Luescher, Thomas F.

CORPORATE SOURCE: Department of Research, University Hospital, Basel,

Switz.

SOURCE: Journal of Cardiovascular Pharmacology (1995), 26(2),

312-18

CODEN: JCPCDT; ISSN: 0160-2446

PUBLISHER: Lippincott-Raven

DOCUMENT TYPE: Journal LANGUAGE: English IT 116644-53-2, Mibefradil

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (calcium antagonist mibefradil effects in epicardial and

intramyocardial coronary arteries)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L41 ANSWER 414 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1995:714882 HCAPLUS

DOCUMENT NUMBER: 123:101913

TITLE: High-performance liquid chromatographic analysis of

mibefradil in dog plasma and urine

AUTHOR(S): Skerjanec, A.; Tam, Y. K.

CORPORATE SOURCE: Faculty of Pharmacy and Pharmaceutical Sciences,

University of Alberta, Edmonton, AB, T6G 2N8, Can.

SOURCE: Journal of Chromatography, B: Biomedical Applications

(1995), 669(2), 377-82

CODEN: JCBBEP; ISSN: 0378-4347

PUBLISHER: Elsevier DOCUMENT TYPE: Journal LANGUAGE: English

IT 116644-53-2, Mibefradil

RL: ANT (Analyte); BPR (Biological process); BSU (Biological study, unclassified); ANST (Analytical study); BIOL (Biological study); PROC

(Process)

(mibefradil determination in plasma and urine by HPLC)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

L41 ANSWER 415 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:15784 HCAPLUS

DOCUMENT NUMBER: 118:15784

TITLE: Metabolism of calcium antagonist Ro 40-5967: a case

history of the use of diode-array UV spectroscopy and thermospray-mass spectrometry in the elucidation of a

complex metabolic pathway

AUTHOR(S): Wiltshire, H. R.; Harris, S. R.; Prior, K. J.;

Kozlowski, U. M.; Worth, E.

CORPORATE SOURCE: Dep. Pharmacokinet. Metab., Roche Prod. Ltd., Welwyn

Garden City/Herts., AL7 3AY, UK Xenobiotica (1992), 22(7), 837-57 CODEN: XENOBH; ISSN: 0049-8254

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116644-53-2

SOURCE:

RL: PROC (Process)

(as Ro 5967 metabolite, characterization of, by diode-array UV

spectroscopy and thermospray-mass spectrometry)

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S, 2S)-2-[2-[[3-(1H-benzimidazol-2-(1S, 2S)-2-[2-[1S, 2S)-2-[2-[1S, 2S]-2-[2-[1S, 2S]-2-[2-[1S, 2S]-2-[2-[1S, 2S]-2-[2-[1S, 2S]-2-[2-[1S, 2S]-2-[2-[1S, 2S]-2-[2-[1S, 2S]-2-[2-[1S, 2S]-2-[2-[1S, 2S]-2-[2-[1S]-2-[1S]-2-[2-[1S]-2-[2-[1S]-2-[1S]-2-[1S]-2-[1S]-2-[1S]-2-[1S]-2-[1S]-2-[1S]-2-[1S]-2-[1S]-2-[1S]-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

L41 ANSWER 416 OF 416 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:549535 HCAPLUS

DOCUMENT NUMBER: 109:149535

TITLE: Preparation of [[(heterocyclylalkyl)amino]ethyl]tetrah

ydronaphthalenes as cardiova'scular agents

INVENTOR(S): Branca, Quirico; Jaunin, Roland; Maerki, Hans Peter;

Marti, Fraenzi; Ramuz, Henri

PATENT ASSIGNEE(S): Hoffmann-La Roche, F., und Co. A.-G., Switz.

SOURCE: Eur. Pat. Appl., 37 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE:

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.   | KIND     | DATE            | APPLICATION NO.                | DATE       |  |
|--|----------|-----------------|--------------------------------|------------|--|
| EP 268148  | A1       | 19880525        | EP 1987-116251                 | 19871104   |  |
| EP 268148  |          |                 |                                |            |  |
| R: AT, BE, CH  | , DE, ES | FR, GB,         | GR, IT, LI, LU, NL, SE         |            |  |
| DK 8705599   | Α        | 19880515        | DK 1987-5599                   | 19871026   |  |
| DK 171349  | B1       | 19960916        |                                |            |  |
| CA 1319144<br>CS 264350<br>AT 70267<br>ES 2040234                          | A1       | 19930615        | CA 1987-550190                 | 19871026   |  |
| CS 264350  | В2       | 19890712        | CS 1987-7874                   |            |  |
| AT 70267   | E        | 19911215        | AT 1987-116251                 | 19871104   |  |
| ES 2040234   | Т3       | 19931016        | ES 1987-116251                 | 19871104   |  |
| ZA 8708362   | Α        | 19880727        |                                | 19871106   |  |
| AU 8780909   | A1       | 19880519        |                                | 19871109   |  |
| AU 600769<br>IL 84407  | В2       | 19900823        |                                |            |  |
| IL 84407   | A1       | 19910916        | IL 1987-84407                  | 19871109   |  |
| JP 63139171<br>JP 2504490  | A2       | 19880610        | JP 1987-282287                 | 19871110   |  |
| JP 2504490   | B2       | 19960605        |                                |            |  |
| US 4808605<br>HU 60251   | A        | 19890228        | US 1987-119114                 | 19871110   |  |
| HU 60251   | A2       | 19920828        | ни 1987-5011                   | 19871111   |  |
| 015015   | _        | 1 0 0 0 0 0 0 0 |                                |            |  |
| FI 8705024   | Α        | 19880515        | FI 1987-5024                   | 19871113   |  |
| FI 94414   | В        | 19950531        |                                |            |  |
| FI 94414   | С        | 19950911        |                                |            |  |
| NO 8704757   | Α        | 19880516        | NO 1987-4757                   | 19871113   |  |
| FI 8705024<br>FI 94414<br>FI 94414<br>NO 8704757<br>NO 172237<br>NO 172237 | В        | 19930315        |                                |            |  |
| NO 172237  | С        | 19930623        |                                |            |  |
| CN 87107875  | A        | 19880525        | CN 1987-107875                 | 19871113   |  |
| CN 1028991   | В        | 19950621        |                                |            |  |
| PRIORITY APPLN. INFO.:   |          |                 | CH 1986-4565                   | A 19861114 |  |
|  |          |                 | CH 1986-4565<br>EP 1987-116251 | A 19871104 |  |
|  |          |                 |                                |            |  |

OTHER SOURCE(S): MARPAT 109:149535

# IT 116644-53-2P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of, as cardiovascular agent)

German

RN 116644-53-2 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester (9CI) (CA INDEX NAME)

=> d que stat 142

L38 1 SEA FILE=REGISTRY ABB=ON PLU=ON 116666-63-8

63 SEA FILE=HCAPLUS ABB=ON PLU=ON L38

# => d 142 ibib hitstr 1-5 50-63

L42 ANSWER 1 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 20

2006:100738 HCAPLUS

DOCUMENT NUMBER:

144:198849

TITLE:

Novel dosage form comprising modified-release and

immediate-release active ingredients

INVENTOR(S):

Vaya, Navin; Karan, Rajesh Singh; Sadanand, Sunil;

Gupta, Vinod Kumar

PATENT ASSIGNEE(S):

SOURCE:

U.S. Pat. Appl. Publ., 49 pp., Cont.-in-part of U.S.

Ser. No. 630,446.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

India

LANGUAGE:

English 2

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PATENT NO.             | KIND | DATE     | APPLICATION NO. |    | DATE     |
|------------------------|------|----------|-----------------|----|----------|
|                        |      |          |                 | -  |          |
| US 2006024365          | A1   | 20060202 | US 2005-134633  |    | 20050519 |
| US 2004096499          | A1   | 20040520 | US 2003-630446  |    | 20030729 |
| PRIORITY APPLN. INFO.: |      |          | IN 2002-MU697   | A  | 20020805 |
|                        |      |          | IN 2002-MU699   | Α  | 20020805 |
|                        |      |          | IN 2003-MU80    | Α  | 20030122 |
|                        |      |          | IN 2003-MU82    | Α  | 20030122 |
|                        |      |          | US 2003-630446  | A2 | 20030729 |

IT 116666-63-8, Mibefradil dihydrochloride

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(novel dosage form comprising modified-release and immediate-release
active ingredients)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

●2 HC1

L42 ANSWER 2 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

2005:1335082 HCAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 144:57599

TITLE: Transdermal delivery system for statin combination

therapy

INVENTOR(S): Lane, Edward M.

PATENT ASSIGNEE(S): Fairfield Clinical Trials, LLC, USA

SOURCE: U.S. Pat. Appl. Publ., 7 pp.

CODEN: USXXCO

DOCUMENT TYPE:

Patent

LANGUAGE:

English

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

| PAC      | CENT | NO.  |      |     | KIN | D   | DATE |      |     | APPL | ICAT | ION  | .00 |     | D.  | ATE  |     |
|----------|------|------|------|-----|-----|-----|------|------|-----|------|------|------|-----|-----|-----|------|-----|
|          |      |      |      |     |     | -   |      |      |     |      |      |      |     |     | _   |      |     |
| US       | 2005 | 2818 | 68   |     | A1  |     | 2005 | 1222 | 1   | US 2 | 005- | 1567 | 4 4 |     | 2   | 0050 | 621 |
| WO       | 2006 | 0021 | 27   |     | A1  |     | 2006 | 0105 | 1   | WO 2 | 005- | US21 | 355 |     | 2   | 0050 | 621 |
|          | W:   | ΑE,  | AG,  | AL, | AM, | ΑT, | AU,  | ΑZ,  | BA, | BB,  | BG,  | BR,  | BW, | BY, | BZ, | CA,  | CH, |
| •        |      | CN,  | CO,  | CR, | CU, | CZ, | DE,  | DK,  | DM, | DZ,  | EC,  | EE,  | EG, | ES, | FΙ, | GB,  | GD, |
|          |      | GE,  | GH,  | GM, | HR, | HU, | ID,  | IL,  | IN, | IS,  | JP,  | ΚE,  | KG, | KM, | KP, | KR,  | ΚZ, |
|          |      | LC,  | LK,  | LR, | LS, | LT, | LU,  | LV,  | MA, | MD,  | MG,  | MK,  | MN, | MW, | MX, | ΜZ,  | NA, |
|          |      | NG,  | NI,  | NO, | ΝZ, | OM, | PG,  | PH,  | PL, | PT,  | RO,  | RU,  | SC, | SD, | SE, | SG,  | SK, |
|          |      | SL,  | SM,  | SY, | ТJ, | TM, | TN,  | TR,  | TT, | ΤZ,  | UA,  | UG,  | US, | UZ, | VC, | VN,  | YU, |
|          |      | ZA,  | ZM,  | ZW  |     |     |      |      |     |      |      |      |     |     |     |      |     |
|          | RW:  | ΑT,  | BE,  | BG, | CH, | CY, | CZ,  | DE,  | DK, | EE,  | ES,  | FI,  | FR, | GB, | GR, | HU,  | ΙE, |
|          |      | IS,  | IT,  | LT, | LU, | MC, | NL,  | PL,  | PT, | RO,  | SE,  | SI,  | SK, | TR, | BF, | ВJ,  | CF, |
|          |      | CG,  | CI,  | CM, | GA, | GN, | GQ,  | GW,  | ML, | MR,  | ΝE,  | SN,  | TD, | TG, | BW, | GH,  | GM, |
|          |      | ΚE,  | LS,  | MW, | MZ, | NA, | SD,  | SL,  | SZ, | ΤZ,  | UG,  | ZM,  | ZW, | ΑM, | ΑZ, | BY,  | KG, |
|          |      | ΚZ,  | MD,  | RU, | ТJ, | TM  |      |      |     |      |      |      |     |     |     |      |     |
| PRIORITY | APP  | LN.  | INFO | . : |     |     |      |      | 1   | US 2 | 004- | 5807 | 34P |     | P 2 | 0040 | 621 |
|          |      |      |      |     |     |     |      |      | 1   | US 2 | 004- | 6128 | 28P | 1   | P 2 | 0040 | 927 |

#### 116666-63-8, Posicor IT

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses) (transdermal delivery system for statin combination therapy of lipid disorders)

116666-63-8 HCAPLUS RN

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

●2 HCl

L42 ANSWER 3 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2005:388287 HCAPLUS

DOCUMENT NUMBER: 143:71181

TITLE: Modulation of Oral Squamous Cell Carcinoma Incidence

in Rats Via Diet and a Novel Calcium Channel

Antagonist

AUTHOR(S): Lenz, Barbara; Crameri, Flavio M.; Eichler, David A.;

Schlaeppi, Bernhard; Wiltshire, Hugh R.; Wood, John;

Seymour, Robin A.

CORPORATE SOURCE: Non-Clinical Development-Drug Safety, Hoffmann-La

Roche Ltd., Basel, Switz.

SOURCE: Toxicologic Pathology (2005), 33(3), 356-364

CODEN: TOPADD; ISSN: 0192-6233

PUBLISHER: Taylor & Francis, Inc.

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116666-63-8, Mibefradil dihydrochloride

RL: ADV (Adverse effect, including toxicity); DMA (Drug mechanism of action); PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)

(mibefradil dihydrochloride showed dose dependent gingival overgrowth in incisor and molar teeth independent of diet used, high-dose administration raised incidence of periodontitis and squamous cell

carcinoma in rat) 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

RN

●2 HC1

REFERENCE COUNT: 16 THERE ARE 16 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L42 ANSWER 4 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:292562 HCAPLUS

DOCUMENT NUMBER: 140:399350

TITLE: NNC 55-0396 [(1S,2S)-2-(2-(N-[(3-benzimidazol-2-

yl)propyl]-N-methylamino)ethyl)-6-fluoro-1,2,3,4-

tetrahydro-1-isopropyl-2-naphthyl

cyclopropanecarboxylate dihydrochloride]: a new selective inhibitor of T-type calcium channels

AUTHOR(S): Huang, Luping; Keyser, Brian M.; Tagmose, Tina M.;

Hansen, J. Bondo; Taylor, James T.; Zhuang, Hean;

Zhang, Min; Ragsdale, David S.; Li, Ming

CORPORATE SOURCE: Department of Pharmacology, Tulane University Health

Sciences Center, New Orleans, LA, USA

SOURCE: Journal of Pharmacology and Experimental Therapeutics

(2004), 309(1), 193-199 CODEN: JPETAB; ISSN: 0022-3565

PUBLISHER: American Society for Pharmacology and Experimental

Therapeutics

DOCUMENT TYPE: Journal LANGUAGE: English

OTHER SOURCE(S): CASREACT 140:399350 116666-63-8, Mibefradil dihydrochloride

RL: RCT (Reactant); RACT (Reactant or reagent)

(mibefradil derivative selectively inhibits T-type calcium channels)

116666-63-8 HCAPLUS RN

Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-CN

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

## ● 2 HC1

REFERENCE COUNT: 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L42 ANSWER 5 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

2001:916407 HCAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 136:53755

TITLE: Synthesis of nitrosated and nitrosylated

(hetero)cyclic phosphodiesterase inhibitors used in

treatment of sexual dysfunction

INVENTOR(S): Garvey, David S.; Saenz de Tejada, Inigo; Earl,

Richard A.; Khanapure, Subhash P.

PATENT ASSIGNEE(S): Nitromed, Inc., USA

SOURCE: U.S., 117 pp., Cont.-in-part of U.S. 5,958,926.

CODEN: USXXAM

DOCUMENT TYPE: LANGUAGE:

Patent English

FAMILY ACC. NUM. COUNT: 3

PATENT INFORMATION:

| PATENT NO. | KIND | DATE     | APPLICATION NO. | DATE     |
|------------|------|----------|-----------------|----------|
|            |      |          |                 |          |
| US 6331543 | B1   | 20011218 | US 1999-387727  | 19990901 |
| US 5874437 | Α    | 19990223 | US 1996-740764  | 19961101 |

| WO 9819672 A1 19980514<br>W: AU, CA, JP, US | WO 1997-US19870 19971031                |
|---|---|
|   | FR, GB, GR, IE, IT, LU, MC, NL, PT, SE  |
|   | US 1998-145142 19980901                 |
| US 2002019405 A1 20020214                   |   |
| US 6462044 B2 20021008                      | 05 2001 541051 20010050                 |
| US 2003023087 A1 20030130                   | US 2002-216886 20020813                 |
| US 6930113 B2 20050816                      | 03 2002-210000 20020013                 |
| US 2004087591 A1 20040506                   | HC 2002 604102 20021020                 |
|   |   |
| PRIORITY APPLN. INFO.:                      | US 1996-740764 A2 19961101              |
|   | WO 1997-US19870 A2 19971031             |
|   | US 1998-145142 A2 19980901              |
|   | US 1999-387727 A1 19990901              |
|   | US 2001-941691 A3 20010830              |
|   | US 2002-216866 A3 20020813              |
| OTHER SOURCE(S): MARPAT 136:53755           |   |
| IT 116666-63-8D, Posicor, nitroso deriv     | S.                                      |
| RL: PAC (Pharmacological activity);         |   |
| (Biological study); USES (Uses)             | (                                       |
| (synthesis of nitrosated and nitr           | osylated (hetero)cyclic                 |
|   | in treatment of sexual dysfunction)     |
| RN 116666-63-8 HCAPLUS                      | in creatment of Sexual dystanecton,     |
| CN Acetic acid, methoxy-, (1S,2S)-2-[2-     | [[3-/14-hongimidago]-2-                 |
|   |   |
|   | o-1,2,3,4-tetrahydro-1-(1-methylethyl)- |
| 2-naphthalenyl ester, dihydrochlorid        | e (9CI) (CA INDEX NAME)                 |

Absolute stereochemistry.

REFERENCE COUNT:

# ●2 HC1

86

RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT L42 ANSWER 50 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN ACCESSION NUMBER: 1993:204998 HCAPLUS DOCUMENT NUMBER: 118:204998 TITLE: Effects of Ro 40-5967, a new calcium antagonist, and enalapril on cardiac remodeling in renal hypertensive rats AUTHOR(S): Veniant, Murielle; Clozel, Jean Paul; Heudes, Didier; Banken, Ludger; Menard, Joel CORPORATE SOURCE: Pharma Div., F. Hoffmann-La Roche, Basel, CH-4002, Switz. SOURCE: Journal of Cardiovascular Pharmacology (1993), 21(4), 544-51 CODEN: JCPCDT; ISSN: 0160-2446

THERE ARE 86 CITED REFERENCES AVAILABLE FOR THIS

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116666-63-8

RL: BIOL (Biological study)

(cardiac remodeling in renal hypertension response to enalapril vs.)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

#### ●2 HC1

L42 ANSWER 51 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:139549 HCAPLUS

DOCUMENT NUMBER: 118:139549

TITLE: Ro 40-5967, a novel calcium channel antagonist,

protects against ventricular fibrillation

AUTHOR(S): Billman, George E.

CORPORATE SOURCE: Dep. Physiol., Ohio State Univ., Columbus, OH, USA

SOURCE: European Journal of Pharmacology (1993), 229(2-3),

179-87

CODEN: EJPHAZ; ISSN: 0014-2999

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116666-63-8

RL: PRP (Properties)

(antiarrhythmic effects of, in heart ischemia and ventricular

fibrillation)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

#### ●2 HCl

L42 ANSWER 52 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1993:15784 HCAPLUS

DOCUMENT NUMBER: 118:15784

TITLE: Metabolism of calcium antagonist Ro 40-5967: a case

history of the use of diode-array UV spectroscopy and thermospray-mass spectrometry in the elucidation of a

complex metabolic pathway

AUTHOR(S): Wiltshire, H. R.; Harris, S. R.; Prior, K. J.;

Kozlowski, U. M.; Worth, E.

CORPORATE SOURCE: Dep. Pharmacokinet. Metab., Roche Prod. Ltd., Welwyn

Garden City/Herts., AL7 3AY, UK Xenobiotica (1992), 22(7), 837-57

CODEN: XENOBH; ISSN: 0049-8254

DOCUMENT TYPE: Journal

LANGUAGE: English

IT 116666-63-8

SOURCE:

RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL

(Biological study); PROC (Process)

(metabolism of, diode-array UV spectroscopy and thermospray-mass spectrometry in elucidation of complex metabolic pathway in)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

●2 HC1

L42 ANSWER 53 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:604926 HCAPLUS

DOCUMENT NUMBER: 117:204926

TITLE: Effect of calcium channel antagonists on the cardiac

vagal tone response to submaximal exercise

AUTHOR(S): Billman, George E.; Halliwill, John R.; Avendano,

Christopher E.

CORPORATE SOURCE: Dep. Physiol., Ohio State Univ., Columbus, OH, USA

SOURCE: Drug Development Research (1992), 27(2), 89-106

CODEN: DDREDK; ISSN: 0272-4391

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116666-63-8

RL: BIOL (Biological study)

(exercise effect on cardiac vagal tone response to, as calcium channel

antagonist)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

#### ●2 HC1

L42 ANSWER 54 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:143594 HCAPLUS

DOCUMENT NUMBER: 116:143594

TITLE: Hemodynamic profile of Ro 40-5967 in conscious rats:

comparison with diltiazem, verapamil, and amlodipine

AUTHOR(S): Veniant, Murielle; Clozel, Jean Paul; Hess, Patrick;

Wolfgang, Robert

CORPORATE SOURCE: Pharma Div., F. Hoffmann-La Roche Ltd., Basel,

CH-4002, Switz.

SOURCE: Journal of Cardiovascular Pharmacology (1991),

18(Suppl. 10), S55-S58

CODEN: JCPCDT; ISSN: 0160-2446

LANGUAGE:

Journal English

IT **116666-63-8** 

DOCUMENT TYPE:

RL: BIOL (Biological study)

(hemodynamic profile of, as calcium antagonist)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

$$\begin{array}{c|c} & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & \\ & & & \\$$

#### ●2 HC1

L42 ANSWER 55 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1992:33723 HCAPLUS

DOCUMENT NUMBER: 116:33723

TITLE: Ro 40-5967: a new nondihydropyridine calcium

antagonist

AUTHOR(S): Clozel, Jean Paul; Osterrieder, Wolfgang;

Kleinbloesem, Cornelis H.; Welker, Horst A.;

Schlaeppi, Bernhard; Tudor, Robert; Hefti, Fridolin;

Schmitt, Rita; Eggers, Herwig

CORPORATE SOURCE: Pharm. Res. Dep., F. Hoffmann-La Roche Ltd., Basel,

CH-4002, Switz.

SOURCE: Cardiovascular Drug Reviews (1991), 9(1), 4-17

CODEN: CDREEA; ISSN: 0897-5957

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

IT 116666-63-8

RL: BIOL (Biological study)

(as nondihydropyridine calcium antagonist)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S, 2S)-2-[2-[[3-(1H-benzimidazol-2-(1S, 2S)-2-[2-[1]-[1S, 2S]-2-[2-[1]-[1S, 2S]-2-[2-[1]-[1S,

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

$$\begin{array}{c|c} & & & \\ &$$

●2 HC1

L42 ANSWER 56 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:240328 HCAPLUS

DOCUMENT NUMBER: 114:240328

TITLE: Potential-dependent inhibition of cardiac calcium

inward currents by Ro 40-5967 and verapamil: relation

to negative inotropy

AUTHOR(S): Fang, Liang Min; Osterrieder, Wolfgang

CORPORATE SOURCE: Pharm. Res. Dep., F. Hoffmann-La Roche Ltd., Basel,

CH-4002, Switz.

SOURCE: European Journal of Pharmacology (1991), 196(2), 205-7

CODEN: EJPHAZ; ISSN: 0014-2999

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116666-63-8

RL: BIOL (Biological study)

(heart calcium currents and neg. inotropic response to)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

y1)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

# ●2 HCl

L42 ANSWER 57 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:240319 HCAPLUS

DOCUMENT NUMBER: 114:240319

TITLE: Increased negative inotropic effect of calcium-channel

blockers in hypertrophied and failing rabbit heart Ezzaher, Abdellatif; Bouanani, Nour el Houda; Su, Jin

Bo; Hittinger, Luc; Crozatier, Bertrand

CORPORATE SOURCE: Fac. Med., Hop. Henri Mondor, Creteil, 94000, Fr.

SOURCE: Journal of Pharmacology and Experimental Therapeutics

(1991), 257(1), 466-71

CODEN: JPETAB; ISSN: 0022-3565

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116666-63-8

AUTHOR(S):

RL: PRP (Properties)

(increased neg. inotropic effect of, in heart failure and hypertrophy)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

#### ●2 HC1

L42 ANSWER 58 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1991:94918 HCAPLUS

DOCUMENT NUMBER: 114:94918

TITLE: Ro 40-5967, in contrast to diltiazem, does not reduce

left ventricular contractility in rats with chronic

myocardial infarction

AUTHOR(S): Veniant, Murielle; Clozel, Jean Paul; Hess, Patrick;

Wolfgang, Robert

CORPORATE SOURCE: Pharm. Res. Dep., F. Hoffman-La Roche Ltd., Basel,

CH-4002, Switz.

SOURCE: Journal of Cardiovascular Pharmacology (1991), 17(2),

277-84

CODEN: JCPCDT; ISSN: 0160-2446

DOCUMENT TYPE: Journal LANGUAGE: English

IT **116666-63-8**, Ro 40-5967

RL: PRP (Properties)

(neg. inotropic effect of, in heart infarction)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

●2 HC1

L42 ANSWER 59 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:609229 HCAPLUS

DOCUMENT NUMBER: 113:209229

TITLE: The proliferative response to vascular injury is

suppressed by angiotensin-converting enzyme inhibition

AUTHOR(S): Powell, Jerry S.; Mueller, Rita K. M.; Rouge,

Marianne; Kuhn, Herbert; Hefti, Fridolin; Baumgartner,

Hans R.

CORPORATE SOURCE: F. Hoffmann-La Roche Ltd., Basel, Switz.

SOURCE: Journal of Cardiovascular Pharmacology (1990),

16(Suppl. 4), S42-S49

CODEN: JCPCDT; ISSN: 0160-2446

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116666-63-8

RL: BIOL (Biological study)

(blood vessel proliferation response to, angiotensin-converting enzyme

inhibition in relation to)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

●2 HC1

L42 ANSWER 60 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1990:229520 HCAPLUS

DOCUMENT NUMBER: 112:229520

TITLE: Antihypertensive properties of the novel calcium

antagonist (1S, 2S) -2-[2-[[3-(2-

benzimidazolyl)propyl]methylamino]ethyl]-6-fluoro-

1,2,3,4-tetrahydro-1-isopropyl-2-naphthyl

methoxyacetate dihydrochloride in rat models of

hypertension. Comparison with verapamil Hefti, F.; Clozel, J. P.; Osterrieder, W.

AUTHOR(S): Hefti, F.; Clozel, J. P.; Osterrieder, W. CORPORATE SOURCE: F. Hoffmann-La Roche Ltd., Basel, Switz. SOURCE: Arzneimittel-Forschung (1990), 40(4), 417

Arzneimittel-Forschung (1990), 40(4), 417-21 CODEN: ARZNAD; ISSN: 0004-4172

DOCUMENT TYPE: Journal LANGUAGE: English

IT 116666-63-8

RL: BAC (Biological activity or effector, except adverse); BSU (Biological

study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(antihypertensive activity of)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

#### ●2 HC1

L42 ANSWER 61 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1989:625064 HCAPLUS

DOCUMENT NUMBER: 111:225064

TITLE: Effects of Ro 40-5967, a novel calcium antagonist, on

myocardial function during ischemia induced by lowering coronary perfusion pressure in dogs:

comparison with verapamil

AUTHOR(S): Clozel, Jean Paul; Banken, Ludger; Osterrieder,

Wolfgang

CORPORATE SOURCE: Pharm. Res. Dep., F. Hoffmann-La Roche and Co., Ltd.,

Basel, CH-4002, Switz.

SOURCE: Journal of Cardiovascular Pharmacology (1989), 14(5),

713-21

CODEN: JCPCDT; ISSN: 0160-2446

DOCUMENT TYPE: Journal LANGUAGE: English

IT **116666-63-8**, Ro 40-5967

RL: BIOL (Biological study)

(heart ischemia inhibition by)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

#### ●2 HC1

L42 ANSWER 62 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1989:400442 HCAPLUS

DOCUMENT NUMBER: 111:442

TITLE: In vitro pharmacologic profile of Ro 40-5967, a novel

calcium channel blocker with potent vasodilator but

weak inotropic action

AUTHOR(S): Osterrieder, Wolfgang; Holck, Mark

CORPORATE SOURCE: Pharm. Res. Dep., F. Hoffmann-La Roche and Co., Ltd.,

Basel, CH-4002, Switz.

SOURCE: Journal of Cardiovascular Pharmacology (1989), 13(5),

754-9

CODEN: JCPCDT; ISSN: 0160-2446

DOCUMENT TYPE: Journal LANGUAGE: English

IT **116666-63-8**, Ro 40-5967 RL: BIOL (Biological study)

(coronary artery dilation by, inotropic action in relation to)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-

yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-

2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

Absolute stereochemistry.

# ●2 HC1

L42 ANSWER 63 OF 63 HCAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 1988:549535 HCAPLUS

DOCUMENT NUMBER: 109:149535

TITLE: Preparation of [[(heterocyclylalkyl)amino]ethyl]tetrah

ydronaphthalenes as cardiovascular agents

INVENTOR(S): Branca, Quirico; Jaunin, Roland; Maerki, Hans Peter;

Marti, Fraenzi; Ramuz, Henri

PATENT ASSIGNEE(S): Hoffmann-La Roche, F., und Co. A.-G., Switz.

SOURCE: Eur. Pat. Appl., 37 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

| PATENT NO.                           | KIND   | DATE        | APPLICATION NO.                                  | DATE     |
|--------------------------------------|--------|-------------|--|----------|
| EP 268148                            | A1     | 19880525    | EP 1987-116251                                   |          |
| EP 268148                            | В1     | 19911211    |  |          |
| R: AT, BE, CH,                       | DE, ES | , FR, GB, G | GR, IT, LI, LU, NL, SE                           |          |
| DK 8705599                           | Α      | 19880515    | DK 1987-5599                                     | 19871026 |
| DK 171349                            | B1     | 19960916    |  |          |
| CA 1319144                           | A1     | 19930615    | CA 1987-550190                                   | 19871026 |
| CS 264350                            | B2     | 19890712    | CS 1987-7874                                     | 19871103 |
| AT 70267                             | E      | 19911215    | CS 1987-7874<br>AT 1987-116251<br>ES 1987-116251 | 19871104 |
| ES 2040234                           | Т3     | 19931016    | ES 1987-116251                                   | 19871104 |
| ZA 8708362                           | Α      | 19880727    | ZA 1987-8362                                     | 19871106 |
| AU 8780909                           | A1     | 19880519    | AU 1987-80909                                    |          |
| AU 600769                            | B2     | 19900823    |  |          |
| IL 84407                             |        |             |  |          |
| JP 63139171                          | A2     | 19880610    | JP 1987-282287                                   | 19871110 |
| JP 2504490                           | B2     | 19960605    |  |          |
| US 4808605                           | Α      | 19890228    | US 1987-119114                                   | 19871110 |
| НU 60251<br>НU 215915                | A2     | 19920828    | HU 1987-5011                                     | 19871111 |
| ни 215915                            | В      | 19990329    |  |          |
| FI 8705024                           | Α      | 19880515    | FI 1987-5024                                     | 19871113 |
| FI 94414                             | В      | 19950531    |  |          |
| FI 94414                             | С      | 19950911    |  |          |
| NO 8704757<br>NO 172237<br>NO 172237 | Α      | 19880516    | NO 1987-4757                                     | 19871113 |
| NO 172237                            | В      | 19930315    |  |          |
| NO 172237                            | С      | 19930623    |  |          |
| CN 87107875                          | A      | 19880525    | CN 1987-107875                                   | 19871113 |
| CN 1028991                           | В      | 19950621    |  |          |
| PRIORITY APPLN. INFO.:               |        |             | CH 1986-4565 A                                   | 19861114 |
|                                      |        | ٥           | EP 1987-116251 A                                 | 19871104 |

OTHER SOURCE(S): MARPAT 109:149535

#### IT 116666-63-8P

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of, as cardiovascular agent)

RN 116666-63-8 HCAPLUS

CN Acetic acid, methoxy-, (1S,2S)-2-[2-[[3-(1H-benzimidazol-2-yl)propyl]methylamino]ethyl]-6-fluoro-1,2,3,4-tetrahydro-1-(1-methylethyl)-2-naphthalenyl ester, dihydrochloride (9CI) (CA INDEX NAME)

●2 HC1